Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23,06,97 : ISO 4113

Combination No. : F 002 A0Z 006

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number

: 9 410 037 214

Governor

Governer design. : RSV475...1100A0C880R

Governer no.

Cust. part No. : 3930154

Customer-spec. information Customer : CDC

Motor

: 4BT3.9

Power KW

: 63.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve

: 2 417 413 093

Inlet press. bar :

: +- 0.1

Tolerance bar

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

A01

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm 2.45

: +- 0.05 Tolerance mm

Check

: ← 0.10 tolerance mm

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 6.50

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.80

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 97.5

Tolerance cm3/1000 strokes : +- 1.0 +	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : +- 3.0	cm3/1000s. : +- 3.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	CONTROL LEVER
Rated speed rpm : 475	<pre>control lever position degree : 108.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 5.65 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 20.5	RATED SPEED rack travel mm : 10.40 Rated speed rpm : 1155 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed	rack travel mm : 6.00 Rated speed rpm : 1220 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 8.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 6.00 Rated speed rpm : 1220 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : -3 Rated speed rpm : 800	control lever position degree : 89.0 tolerance degree : + 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	<pre>Control lever difference Grad : 19.0 tolerance degree : +- 4.0</pre>
governor spring pre-tension click setting x : 5.00	Setting point w/out bumper spring Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 5.15 Tolerance mm : +- 0.10
Rated speed rpm : 1100 + Aneroid pressure	Rated speed rpm : 100
hPa :	CRT mm min. : > 19.00
cm3/1000 strokes : 97.5 +	Testing:

Rated speed rpm : 475 rack travel mm : 5.65 rack travel mm Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 11.80 Tolerance mm : +- 0.05

Rated speed rpm : 750 rack travel mm : 12.10 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 750

Del. quantity

cm3/1000 strokes : 100.5

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 20.50 rack travel mm : : +- 0.50 Tolerance mm Del. quantity

cm3/1000 strokes : 122.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 475

Rack travel in mm: 5.65 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 20.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 27,06,97 Test oil : ISO 4113

Combination No. : F 002 A0Z 064

Injection pump

Pump designation : PES4A95D320/3RS2927

EP type number : F 002 A10 017

Governor

Governer design. : RSV475...1000A2C944R

Governer no. : F 002 A20 245

Cust. part No. : 3933090

Customer-spec. information Customer : CDC : 4BNA3.9 Motor Power KW : 40.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Phasing Tolerance : +- 0.50

: +- 0.75

Check

tolerance °NW

Start of delivery blocking

°NW after s.o.d. : 7.25 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 7.60 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 67.5	+ Aneroid pressure + hPa : -
Tolerance cm3/1000 strokes : +- 1.0	+ Del. quantity + cm3/1000 strokes : 67.5 + Tolerance
Check tolerance cm3/1000s. : +- 3.0	cm3/1000 strokes : + 1.0 + Check tolerance + cm3/1000s. : + 3.0
Spreed	+ Spreed + Tolerance
Tolerance cm3/1000 strokes : 3.5	- cm3/1000 strokes : 3.5 - Check tolerance - cm3/1000s. : 6.0
Check tolerance	+
cm3/1000s. : 6.0	CONTROL LEVER
Rated speed rpm : 475	control lever position degree : 95.0 tolerance degree : +- 4.0
Rack travel in mm : 4.60 Tolerance mm : +- 0.10 Del. quantity	RATED SPEED : 6.60
cm3/1000 strokes : 13.5 Tolerance	Rated speed rpm : 1070 Tolerance 1/min : + 5
<pre>cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5</pre>	† + rack travel mm : 4.00 + Rated speed rpm : 1090
Spreed Tolerance cm3/1000 strokes : 3.5	Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : 5.5	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55 + Rated speed rpm : 1175
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ rack travel mm : 4.00 + Rated speed rpm : 1090 - Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 77.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	tolerance degree : + 4.0 Control lever difference
governor spring - pre-tension -	Grad : 18.0 tolerance degree : +- 6.0
click setting x : 3.25	Setting point w/out bumper spring Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 475 + rack travel mm : 4.10 + Tolerance mm : + 0.10
Rated speed rpm : 1000	Rated speed rpm : 100

CRT mm min. : > 19.00 Testing: 475 Rated speed rpm : rack travel mm : 4.60 Tolerance mm : +- 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 7.60 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 8.90 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 66.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : \leftarrow 10.0 Check tolerance cm3/1000s. : +- 15.0 LOW IDLE Rated speed rpm : 475 Rack travel in mm : 4.60 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 13.5

Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.06.97 Test oil : ISO 4113

Combination No. : 0 400 074 883F2

Injection pump

Pump designation : PES4M60C32ORS185 EP type number : 0 410 064 006

Governor

Governer design. : RSF375/1900M78 Governer no. : 0 420 021 274

Cust. part No. :

Customer-spec. information

Customer : MB-PKW
Motor : 0M601 D23 LA

Power KW : 72.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

assembly : 1 688 901 111

Opening pressure

bar : 148.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600 **REMARKS**

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.05
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

NW after s.o.d. : 17.00 Tolerance : + 0.20

Check

tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 59.5

Tolerance cm3/1000 strokes : + 0.7

Check tolerance

cm3/1000s. : +- 1.7

Spreed Tolerance

cm3/1000 strokes : 3.0

Check tolerance : 3.5 cm3/1000s. SET IDLE CONTROL LEVER POSITION Rated speed rpm : 375 Rated speed rpm : 900 Rack travel in mm : 6.00 Tolerance mm : +- 0.10 CRT mm max. : 1.95 Del. quantity cm3/1000 strokes : 6.5 Tolerance LOW IDLE cm3/1000 strokes : +- 0.5Spreed Tolerance control lever cm3/1000 strokes : 1.0 position degree : 12.0 tolerance degree : +- 2.0 (B) SETTING OF INJECTION PUMP Setting point w/out bumper spring WITH GOVERNOR Rated speed rpm : 375 rack travel mm : 6.00 IDLE STAGE SET IDLE AUXILIARY SPRING Rated speed rpm : Rack travel in mm: 6.00 rack travel mm : 4.20 Tolerance mm : +- 0.10 Tolerance mm : +- 0.10 Load pick-up FULL LOAD DELIVERY AT FULL LOAD STOP 250 Rated speed rpm : Rated speed rpm : 900 rack travel mm : > 9.00 Ref. pressure ALDA / ADA hPa : 1850 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 59.5 CRT mm max. : 1.95 Tolerance cm3/1000 strokes : +- 0.7rack travel mm : Rated speed rpm : 6.00 Check tolerance 375 : +- 1.7 cm3/1000s. Spreed Tolerance cm3/1000 strokes : 3.0 TORQUE CONTROL Check tolerance cm3/1000s.3.5 Rated speed rpm : 900 rack travel mm 13.80 Tolerance mm : +- 0.05 RATED SPEED Rated speed rpm : 1500 rack travel mm : 13.20 control lever Tolerance mm : +- 0.10 position degree : 50.0 Rated speed rpm : 1900 Rated speed rpm : 2200 12.50 rack travel mm : 8.30 rack travel mm : +- 0.10 Tolerance mm : +- 0.20 Tolerance mm Rated speed rpm : 900 rack travel mm : 11.15 Rated speed rpm : 2600 0.50 rack travel mm Tolerance mm : +- 0.10 : +- 0.50 Tolerance mm ADJUSTMENT TEST ADA/ALDA

		+ Del. quantity
SETTING		+ cm3/1000 strokes : 43.0 + Tolerance
Rated speed rpm	: 900	+ cm3/1000 strokes : +- 0.7
Ref. pressure ALDA / ADA hPa	: 1600	+ Check tolerance + cm3/1000s. : +- 1.7
rack travel mm	: -0.25	Spreed 1.7
Tolerance mm		+ Tolerance
		+ cm3/1000 strokes : 3.0
MEASUREMENT		+ Check tolerance
Datas and non	. 000	+ cm3/1000s. : 3.5
Rated speed rpm Ref. pressure	: 900	Tof massing
ALDA / ADA hPa	: 1100	+ Ref. pressure + ALDA / ADA hPa : 1100
rack travel mm		Rated speed rpm : 900
Tolerance mm	: +- 0.10	+ Del. quantity
		+ cm3/1000 strokes : 43.0
Ref. pressure		† Tolerance
ALDA / ADA hPa	: 750	+ cm3/1000 strokes : + 0.7
rack travel mm		+ Check tolerance
Tolerance mm	: +- 0.20	+ cm3/1000s. : +- 1.7
		Spreed
		Tolerance
FUEL DELIVERY CHA	ARACTERISTICS	+ cm3/1000 strokes : 3.0 + Check tolerance
FOLL DELIVERY CITY	ANACTERISTICS	- cm3/1000s. : 3.5
Ref. pressure		1
ALDA / ADA hPa	: 1850	+
Rated speed rpm		-
Del. quantity		+ HIGH IDLE
cm3/1000 strokes	: 58.0	+
Tolerance		+ Ref. pressure
cm3/1000 strokes	: +- 1.0	+ ALDA / ADA hPa : 1850
Check tolerance cm3/1000s.	: +- 2.0	Rated speed rpm : 2200
Spreed	: 2.0	+ rack travel mm : 8.30 + Tolerance mm : +- 0.20
Tolerance		+ Del. quantity
cm3/1000 strokes	: 3.0	+ cm3/1000 strokes : 31.0
Check tolerance		+ Tolerance
cm3/1000s.	: 3.5	+ cm3/1000 strokes : +- 2.2
		- Check tolerance
Ref. pressure		+ cm3/1000s. : +- 3.2
ALDA / ADA hPa		+ Spreed
Rated speed rpm	: 1900	+ Tolerance
Spreed		+ cm3/1000 strokes : 3.0
Del. quantity	: 55.5	+ Check tolerance
cm3/1000 strokes Tolerance	: 55.5	t cm3/1000s. : 3.5
cm3/1000 strokes	: +- 1.2	
Check tolerance	1 • ••	STARTING FUEL DELIVERY
cm3/1000s.	: +- 2.2	-
Spreed	_	+ Rated speed rpm : 100
Tolerance		rack travel mm : > 20.10
cm3/1000 strokes	: 3.0	+ Del. quantity
Check tolerance	7.5	+ cm3/1000 strokes : 54.3
cm3/1000s.	: 3.5	+ Tolerance
Dof meaning		+ cm3/1000 strokes : +- 4.0
Ref. pressure ALDA / ADA hPa	: 1100	+ Check tolerance + cm3/1000s. : +- 5.0
Rated speed rpm	: 900	+ cm3/1000s. : +- 5.0 + Spreed
varen sheen thill	, 700	T ohi eed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000S.

8.5

375

7.8

LOW IDLE

Rated speed rpm :

Del. quantity

cm3/1000 strokes :

Check tolerance

cm3/1000s.: +- 2.3

Spreed

Check tolerance

cm3/1000s.

1.5

control lever

position degree : > 42.00

control lever

position degree : < 39.50

SETTING PNEUMATIC FAST IDLE (PLA)

(PLA) POSITION

control lever

position degree : 12.0 tolerance degree : +- 2.0

Rated speed rpm : 425

Rack travel in mm: 8.40 : +- 0.80 Tolerance mm

Del. quantity cm3/1000 strokes : 21.5

Tolerance

cm3/1000 strokes : +- 3.5

Check tolerance

cm3/1000s. : +- 4.5

Vacuum hPa : 450.0

TESTING PNEUMATIC SHUTOFF DEVICE

375 Rated speed rpm

Vacuum hPa -450.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.06.97 Test oil : ISO 4113

Combination No. : 0 400 074 883F1

Injection pump

Pump designation : PES4M60C320RS185 EP type number : 0 410 064 006

Governor

Governer design. : RSF375/1900M78 Governer no. : 0 420 021 274

Cust. part No. :

Customer-spec. information Customer : MB-PKW

Motor : 0M601 D23 LA

Power KW : 72.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

assembly : 1 688 901 111

Opening pressure

bar : 148.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.05
Tolerance mm : +- 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

"NW after s.o.d. : 17.00 Tolerance : \leftarrow 0.20 Check

tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : +- 0.7

Check tolerance cm3/1000s. : +- 1.7

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance	7.5		
cm3/1000s. :	3.5	SET IDLE CONTROL LEV	/ER POSITION
	375	Rated speed rpm :	900
Rack travel in mm : Tolerance mm : +- Del. quantity	6.00 0.10	CRT mm max. :	1.95
cm3/1000 strokes : Tolerance	6.5	LOUITNIE	
cm3/1000 strokes : +- Spreed	0.5	LOW IDLE	
Tolerance cm3/1000 strokes :	1.0	control lever position degree :	
	‡	tolerance degree :	+- 2.0
(B) SETTING OF INJECTION WITH GOVERNOR	ON PUMP	Setting point w/out Rated speed rpm : rack travel mm :	375
IDLE STAGE	Ī	SET IDLE AUXILIARY S	PRING
Rack travel in mm : Tolerance mm : +-	5.00 0.10	Rated speed rpm : rack travel mm : Tolerance mm :	
FULL LOAD DELIVERY AT F	FULL LOAD STOP	Load pick-up	
	+	Rated speed rpm :	250
Rated speed rpm : Ref. pressure	900		> 9.00
ALDA / ADA hPa : 1 Del. quantity	1850	Rated speed rpm :	900
cm3/1000 strokes : Tolerance	59.5	CRT mm max. :	1.95
cm3/1000 strokes : +- Check tolerance	0.7		6.00 375
cm3/1000s. : +- Spreed	1.7		
Tolerance cm3/1000 strokes : Check tolerance	3.0	TORQUE CONTROL	
cm3/1000s. :	3.5	Rated speed rpm : rack travel mm : Tolerance mm :	900 13.80 +- 0.05
RATED SPEED	‡	Rated speed rpm :	1500
control lever	+		13.20
position degree :	50.0		
	2200 +	rack travel mm :	1900 12.50 +- 0.10
Rated speed rpm : 2 rack travel mm :		Rated speed rpm : rack travel mm : Tolerance mm :	11.15
	‡	ADJUSTMENT TEST ADA/	ALDA

0000000		+ Del. quantity	
SETTING		cm3/1000 strokes Tolerance	: 43.0
Rated speed rpm :	900	+ cm3/1000 strokes	· +- 0.7
Ref. pressure		+ Check tolerance	. 0.7
Ref. pressure ALDA / ADA hPa rack travel mm :	1600	+ cm3/1000s.	: +- 1.7
rack travel mm :	-0.25	+ Spreed	
Tolerance mm :	+- 0.20	Tolerance cm3/1000 strokes	. 70
MEASUREMENT		+ Check tolerance	. 3.0
		+ cm3/1000s.	: 3.5
	900	+	•
Ref. pressure	1400	Ref. pressure	4400
	1100 -2.65	+ ALDA / ADA hPa + Rated speed rpm	
Tolerance mm: :	+ 0.10	+ Del. quantity	. 900
		cm3/1000 strokes	: 43.0
Ref. pressure		+ Tolerance	
ALDA / ADA hPa :	750	+ cm3/1000 strokes	: +- 0.7
rack travel mm : Tolerance mm :	-4.30 +- 0.20	† Check tolerance + cm3/1000s.	: +- 1.7
roterance min .	7- 0.20	+ Spreed	; +- 1.7
		Tolerance	
		cm3/1000 strokes	: 3.0
FUEL DELIVERY CHARA	CTERISTICS	+ Check tolerance	
Ref. pressure	•	+ cm3/1000s.	: 3.5
	1850	I	
ALDA / ADA hPa : Rated speed rpm :	1500		
Del. quantity		HIGH IDLE	
cm3/1000 strokes :	58.0	+	
Tolerance cm3/1000 strokes :	± 1.0	Ref. pressure	. 1050
Check tolerance	7.0	+ ALDA / ADA hPa Rated speed rpm	
	+- 2.0	+ rack travel mm	
Spreed		+ Tolerance mm	
Tolerance	7.0	+ Del. quantity	
cm3/1000 strokes : Check tolerance	3.0	+ cm3/1000 strokes + Tolerance	: 31.0
cm3/1000s. :	3.5	cm3/1000 strokes	: +- 2.2
		Check tolerance	
Ref. pressure		+ cm3/1000s.	: +- 3.2
	1850	Spreed	
Rated speed rpm : Spreed	1900	Tolerance cm3/1000 strokes	: 3.0
Del. quantity		Check tolerance	. 5.0
cm3/1000 strokes :	55. 5	- cm3/1000s.	: 3.5
Tolerance		†	
cm3/1000 strokes :	+ 1.2	CTARTING FUEL DEL	TUCOV
Check tolerance	+- 2.2	STARTING FUEL DEL	IVERY
Spreed .		Rated speed rpm	: 100
Tolerance		rack travel mm	
cm3/1000 strokes :	3.0	Del. quantity	E. →
Check tolerance cm3/1000s. :	3.5	cm3/1000 strokes Tolerance	: 54.3
GHD/ 10003;	٠.٠	cm3/1000 strokes	: +- 4.0
Ref. pressure		Check tolerance	• · · · · · · · · · · · · · · · · · · ·
ALDA / ADA hPa :	1100	cm3/1000s.	: + 5.0
Rated speed rpm :	900	Spreed	

Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 8.5

LOW IDLE

Rated speed rpm : 375 Del. quantity cm3/1000 strokes : 7.8 Check tolerance cm3/1000s. : +- 2.3

Spreed Check tolerance

cm3/1000s. 1.5

control lever

position degree : > 42.00

control lever

position degree : < 39.50

SETTING PNEUMATIC FAST IDLE (PLA) (PLA) POSITION

control lever

position degree : 12.0 tolerance degree : +- 2.0

Rated speed rpm : 425

Rack travel in mm: 8.40 Tolerance mm : \leftarrow 0.80 Del. quantity cm3/1000 strokes : 21.5

Tolerance cm3/1000 strokes : + 3.5

Check tolerance

cm3/1000s. 4.5 Vacuum hPa : 400.0

TESTING PNEUMATIC SHUTOFF DEVICE

375 Rated speed rpm : -450.0Vacuum hPa :

End of test specification sheet

A14

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.06.97 Edition Test oil : ISO 4113

Combination No. : 0 400 074 883F3

Injection pump

Pump designation : PES4M60C320RS185 EP type number : 0 410 064 006

Governor

Governer design. : RSF375/1900M78 Governer no. : 0 420 021 274

Cust. part No. :

Customer-spec. information

: MB-PKW Customer

: 0M601 D23 LA Motor

Power KW : 72.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 : + 2.0 Tolerance °C

: 1 469 990 351 Overflow valve

Inlet press. bar : 1.0

Test nozzle holde

: 1 688 901 111 assembly

Opening pressure

: 148.5 bar Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.05 Tolerance mm : +- 0.05 Check tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : +- 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 17.00 : +- 0.20 Tolerance Check

tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : +- 0.7

Check tolerance

cm3/1000s. : +- 1.7

Spreed Tolerance

cm3/1000 strokes :

3.0

Check tolerance cm3/1000s. : 3.5	
	SET IDLE CONTROL LEVER POSITION
Rated speed rpm : 375	† Rated speed rpm : 900
Rack travel in mm : 5.90 Tolerance mm : +- 0.10	+ CRT mm max. : 1.95
Del. quantity	T CKI IIIII IIIAX. 1.93
cm3/1000 strokes : 6.5 Tolerance	LOW IDLE
cm3/1000 strokes : +- 0.5 Spreed	+
Tolerance	t control lever
cm3/1000 strokes : 1.0	<pre>position degree : 12.0 tolerance degree : +- 2.0</pre>
	+
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Setting point w/out bumper spring
WITH GOVERNOR	+ Rated speed rpm : 375 + rack travel mm : 5.90
	+ rack travel mm : 5.90
IDLE STAGE	+ SET IDLE AUXILIARY SPRING
	Rated speed rpm : 500
Rack travel in mm : 6.00	rack travel mm : 4.20
Tolerance mm : +- 0.10	+ Tolerance mm : +- 0.10
	Load pick-up
FULL LOAD DELIVERY AT FULL LOAD STOP	+
Patrod around name a COO	Rated speed rpm : 200
Rated speed rpm : 900 Ref. pressure	rack travel mm : 13.00
ALDA / ADA hPa : 1850	Rated speed rpm : 900
Del. quantity	+
cm3/1000 strokes : 59.5 Tolerance	+ CRT mm max. : 1.95
cm3/1000 strokes : +- 0.7	rack travel mm : 5.90
Check tolerance cm3/1000s. : +- 1.7	Rated speed rpm : 375
Spreed	I
Tolerance	
cm3/1000 strokes : 3.0	TORQUE CONTROL
Check tolerance cm3/1000s. : 3.5	Rated speed rpm : 900
	rack travel mm : 13.80
	Tolerance mm : +- 0.05
RATED SPEED	†
	Rated speed rpm : 1500
control lever	+ rack travel mm : 13.20 + Tolerance mm : +- 0.10
position degree : 50.0	+
Detail aread are : 2200	Rated speed rpm : 1900
Rated speed rpm : 2200	rack travel mm : 12.50
rack travel mm : 8.30 Tolerance mm : +- 0.20	Tolerance mm : +- 0.10
TOTAL MINITED TOTAL MINITED TOTAL MINISTRAL MI	Rated speed rpm : 900
Rated speed rpm : 2600	rack travel mm : 11.15
rack travel mm : 0.50	Tolerance mm : +- 0.10
Tolerance mm : +- 0.50	†
	AD HIGHERT TEST ADA/ALSA
•	ADJUSTMENT TEST ADA/ALDA

		+ Del. quantity
SETTING		- cm3/1000 strokes : 43.0
		+ Tolerance
Rated speed rpm	: 900	+ cm3/1000 strokes : +- 0.7
Ref. pressure	, , , ,	+ Check tolerance
ALDA / ADA hPa	: 1600	+ cm3/1000s. : +- 1.7
rack travel mm	: -0.25	+ Spreed
Tolerance mm		+ Tolerance
rocci di lec ilan	0.20	- cm3/1000 strokes : 3.0
MEASUREMENT		+ Check tolerance
TIEMOONE TEM		- cm3/1000s. : 3.5
Rated speed rpm	: 900	I (11137 10003
Ref. pressure	. 700	Ref. pressure
ALDA / ADA hPa	: 1100	+ ALDA / ADA hPa : 1100
rack travel mm		Rated speed rpm : 900
Tolerance mm	: +- 0.10	Del. quantity
Total arte inii	0.10	cm3/1000 strokes : 43.0
Ref. pressure		Tolerance 43.0
ALDA / ADA hPa	: 750	+ cm3/1000 strokes : +- 0.7
rack travel mm	: -4.30	Check tolerance
Tolerance mm		+ cm3/1000s. : +- 1.7
rocerance inti	0.20	Spreed : 1.7
		Tolerance
		+ cm3/1000 strokes : 3.0
FUEL DELIVERY CHA	PACTEDISTICS	+ Check tolerance
FUEL DELIVERY CHA	IKACIEKISIICS	
Bof pressure		+ cm3/1000s. : 3.5
Ref. pressure ALDA / ADA hPa	: 1850	†
		†
Rated speed rpm	: 1500	HITCH TOLE
Del. quantity cm3/1000 strokes	: 58.0	+ HIGH IDLE
CM3/ IIIIII STEORES		
	. 50.0	T Date management
Tolerance		Ref. pressure
Tolerance cm3/1000 strokes		+ ALDA / ADA hPa : 1850
Tolerance cm3/1000 strokes Check tolerance	: +- 1.0	+ ALDA / ADA hPa : 1850 + Rated speed rpm : 2200
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		+ ALDA / ADA hPa : 1850 + Rated speed rpm : 2200 + rack travel mm : 8.30
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- 1.0	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20
Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance	: +- 1.0 : +- 2.0	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: +- 1.0 : +- 2.0	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: +- 1.0 : +- 2.0 : 3.0	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: +- 1.0 : +- 2.0	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 2.0 : 3.0	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure	: +- 1.0 : +- 2.0 : 3.0 : 3.5	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : + 2.2 Check tolerance cm3/1000s. : + 3.2
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000s trokes : +- 2.2 Check tolerance cm3/1000s : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900 : 55.5 : +- 1.2	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 3.5 STARTING FUEL DELIVERY
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Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900 : 55.5 : +- 1.2 : +- 2.2	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : > 20.10
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000s strokes	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900 : 55.5 : +- 1.2 : +- 2.2	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10 Del. quantity
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Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000s strokes	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900 : 55.5 : +- 1.2 : +- 2.2	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10 Del. quantity cm3/1000 strokes : 54.3 Tolerance
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Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Ref. pressure	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900 : 55.5 : +- 1.2 : +- 2.2 : 3.0 : 3.5	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : > 20.10 Del. quantity cm3/1000 strokes : 54.3 Tolerance cm3/1000 strokes : 54.3 Tolerance cm3/1000 strokes : +- 4.0 Check tolerance
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 2.0 : 3.0 : 3.5 : 1850 : 1900 : 55.5 : +- 1.2 : +- 2.2 : 3.0	ALDA / ADA hPa : 1850 Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10 Del. quantity cm3/1000 strokes : 54.3 Tolerance cm3/1000 strokes : 54.3 Tolerance cm3/1000 strokes : +- 4.0

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s.

8.5

LOW IDLE

Rated speed rpm : 375

Del. quantity

cm3/1000 strokes :

7.8

Check tolerance cm3/1000s.

: +- 2.3

Spreed

Check tolerance

cm3/1000s.

1.5

control lever

position degree : > 42.00

control lever

position degree : < 39.50

SETTING PNEUMATIC FAST IDLE (PLA)

(PLA) POSITION

control lever

position degree 12.0

tolerance degree : +- 2.0

Rated speed rpm : 425

Rack travel in mm : 7.50

: +- 0.80 Tolerance mm

Del. quantity

cm3/1000 strokes : 16.5

Tolerance

cm3/1000 strokes : +- 3.5

Check tolerance cm3/1000s. : +- 4.5

Vacuum hPa : 450.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 375

Vacuum hPa

-450.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.06.97 : ISO 4113

Combination No. : 0 402 010 701

Injection pump

Pump designation : PES12P130A900RS3391

EP type number : 0 412 030 700

Governor

Governer design. :

Governer no.

Cust. part No. :

Customer-spec. information

Customer : FINCANTIERI

Motor : 1312 T 3−B Power K₩ : 625.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : +- 1.0

Prestroke mm : 4.40 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 15.00

Tolerance mm : +- 0.50

Firing order : 1-12- 9- 4- 5

: - 8- 11- 2- 3 : - 10- 7- 6

Phasing : 0-45-60-105-120

: -165-180-225-240

: -285-300-345

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 15.00

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 300.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000s.

: +- 6.0

Spreed

Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000S.	: 10.0
	: 350
Del. quantity cm3/1000 strokes Tolerance	: 30.0
cm3/1000 strokes Check tolerance	: +- 4.0
cm3/1000s. Spreed	: +- 8.0
Tolerance cm3/1000 strokes	: 9.0
Check tolerance	. 7.0
cm3/1000s.	: 13.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	:	900	
Aneroid pressure			
hPa	:	-	
Del. quantity			
cm3/1000 strokes	•	300.0	
Tolerance			
cm3/1000 strokes	:	+- 2.0	
Check tolerance			
cm3/1000s.	:	+- 6.0	
Spreed			
Tolerance			
cm3/1000 strokes	:	6.0	
Check tolerance			
cm3/1000s.	:	10.0	

TORQUE CONTROL		
Rated speed rpm	:	900
rack travel mm	:	15.00
Tolerance mm	: +	-0.05

	:	350	
Del. quantity cm3/1000 strokes Tolerance	•	30.0	
cm3/1000 strokes	: +-	4.0	
Check tolerance cm3/1000s. Spreed	: +-	8.0	
Tolerance cm3/1000 strokes Check tolerance	:	9.0	
cm3/1000s.	:	13.0	

LOW IDLE

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 816

Injection pump

Pump designation : PES6P120A720RS3340 EP type number : 0 412 026 773

Governor

Governer design. : RSV650...1100P8A566

: -5

Governer no. : 0 421 833 601

Cust. part No. :

Customer-spec. information Customer : NH

Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. *C : 40
Tolerance *C : +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 120 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1025	
 ‡	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 11.45	7 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Tolerance mm : +- 0.05	Rated speed rpm : 1025
Del quentity	Aneroid pressure
Del. quantity cm3/1000 strokes : 159.0	hPa : 1600 Del. quantity
The same of the sa	cm3/1000 strokes : 159.0
Tolerance	Tolerance
cm $3/1000$ strokes : $+-$ 1.0	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance
cm3/1000s. : ÷- 6.0	cm3/1000s. : +- 6.0 Spreed
1 3.10	Tolerance
Spreed	cm3/1000 strokes : 5.0
- ,	Check tolerance
Tolerance + cm3/1000 strokes : 5.0 +	cm3/1000s. : 9.0
cm3/1000 strokes: 3.0	
Check tolerance	
cm3/1000s. : 9.0	CONTROL LEVER
†	control lever
Rated speed rpm : 650	position degree : 97.0
Tated speed i piii . 030	RATED SPEED
Rack travel in mm: 4.60	TATLES OF LES
Tolerance mm : + 0.10	rack travel mm : 4.00
Del. quantity	Rated speed rpm : 1100
cm3/1000 strokes : 23.0	Tolerance 1/min : +- 15
Tolerance + 3.0 +	ASSEMBLY GOVERNOR SETTING
Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000s. : +- 6.0	Rated speed rpm : 1067
Spreed	rack travel mm : 10.40
Tolerance	
cm3/1000 strokes : 8.0 + Check tolerance	Rated speed rpm : 1097
cm3/1000s. : 12.0 +	Tolerance 1/min : +- 5 rack travel mm : 4.00
1 12.5	Tack travec min . 4.00
 	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	Tolerance mm : +- 0.55 Rated speed rpm : 1250
WITH GOVERNOR	Rated speed rpm : 1250
I	
	Rated speed rpm : 1068
GUIDE SLEEVE POSITION	rack travel mm : 10.40
+	
+	Rated speed rpm : 1098
control lever + position degree : - 3 +	Tolerance 1/min : +- 5 rack travel mm : 4.00
Rated speed rpm : 800	rack travet mm : 4.00
	rack travel mm : 0.85
Rack travel in mm: 0.50	rack travel mm : 0.85 Tolerance mm : +- 0.55
Tolerance mm : +- 0.20	
+	Detrod arread mrs. 4040
governor spring + + + + + + + + + + + + + + + + + + +	Rated speed rpm : 1069 rack travel mm : 10.40
click setting x : 3.75	rack travet mm : (U.40
TTION DESCRIPTION TO STATE OF THE STATE OF T	

Rated speed rpm	: 1099	+ Rated speed rpm	: 700
Tolerance 1/min	: +- 5	+	
rack travel mm	: 4.00	+	
		+ TORQUE CONTROL	
rack travel mm		+ Rated speed rpm	: 1025
Tolerance mm	: +- 0.55	+ rack travel mm	: 11.45
		+ Tolerance mm	: +- 0.05
0.1	4070	†	
Rated speed rpm	: 1070	+ Rated speed rpm	: 800
rack travel mm	: 10.40	rack travel mm Tolerance mm	: 12.30
Patad speed nom	. 1100	† Toterance mm	: +- 0.10
Rated speed rpm Tolerance 1/min	. 1700	T Poted around and	. 750
rack travel mm		rack travel	: (30
rack cravet min	. 4.00	Rated speed rpm rack travel mm Tolerance mm	12.33
rack traval mm	• 0.85	Toterance iiiii	: - 0.15
rack travel mm Tolerance mm	. 0.05	Ι	
local alice like	6.55	ANEROID/ALTITUDE	
		COMPENSATOR TEST	
Rated speed rpm	: 1071	I COMPENSATOR 1231	
rack travel mm		I	
Tack travet um	. 15.40	↓ SETTING	
Rated speed rpm	: 1101	02.11.10	
Tolerance 1/min	: +- 5	Rated speed rpm	• 500
rack travel mm		Pressure hPa	: 500 : 1600
Table of aree and	4.00	I rack travel mm	• 12 30
rack travel mm	• 0.85	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	· + 0.15
Tolerance mm	: +- 0.55	T Total area min	0.15
TO CO, CITTO THIN		+ Rated speed rom	• 500
		Rated speed rpm Pressure hPa	: -
Rated speed rpm	: 1072	+ rack travel mm	7.80
rack travel mm		+ Tolerance mm	
		+	
Rated speed rpm	: 1102	+ MEASUREMENT	
Tolerance 1/min	: +- 5	+	
rack travel mm		+ Rated speed rpm	: 500
		+	
rack travel mm		+ Pressure hPa	: 1050
Tolerance mm	: +- 0.55	🕂 rack travel mm	: 11.50
		+ Tolerance mm	: + 0.10
		+	
LOW IDLE			
		+ Start interlock	
		†	
control lever	70.0	Rated speed rpm	: > 100
position degree	: 79.0	Charle	
Commission made to 1.7	arab barman anadara	+ Check	. > 00
setting point w/	out bumper spring	speed 1/min	: > 80
Rated speed rpm	: 650		
rack travel mm		FUEL DELIVERY CHA	PACTERISTICS
Tolerance mm		+ OCE DESTANT CHA	MACIENTO I ICO
TO CO. GITTO THE		1	
Testing:		+ Aneroid pressure	
		+ hPa	: 1600
Rated speed rpm	: 650	+ Rated speed rpm	
rack travel mm		+ Del. quantity	
Tolerance mm	: +- 0.10	+ cm3/1000 strokes	: 185.0
	•	Tolerance	
rack travel mm	: 2.00	+ cm3/1000 strokes	: +- 3.0
	- -		- · ·

Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 86.0 Tolerance cm3/1000 strokes : + 1.0Check tolerance cm3/1000s. 4.0 STARTING FUEL DELIVERY Rated speed rpm 100 20.50 rack travel mm : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : + 15.0Check tolerance cm3/1000s. ; +- 19.D LOW IDLE Rated speed rpm : 650 4.60 Rack travel in mm : : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 02.07.97 Test oil : ISO 4113

Combination No. : 0 402 630 811

Injection pump

Pump designation: PE12P130A920/6LS7868

EP type number : 0 412 630 804

Governor

Governer design. : RQV400...1150PA1004

Governer no. : 0 421 813 932

Cust. part No. :

Customer-spec. information

Customer : IVECO-LANCIA : 8292.43.003 Motor

: 938.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1; 4.2

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 120 Tolerance l/h: +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 5.05 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-4-9-8-5-2

: - 11- 10- 3- 6 : - 7- 12

Phasing : 0-15-60-75-120-135

: -180-195-240-255

: -300-315

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

A25

Rack travel in mm : 11.95 Tolerance mm : +- 0.05	travel mm : 3.50 Tolerance mm : +- 0.25
Del. quantity cm3/1000 strokes : 304.5	Rated speed rpm : 1400 guide sleeve travel mm : 11.50
Tolerance cm3/1000 strokes : + 1.5	Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 5.0	GUIDE SLEEVE POSITION
Spreed	control lever position degree : 114
Tolerance cm3/1000 strokes : 20.0	Rated speed rpm : 850
Check tolerance cm3/1000s. : 24.0	+ Rack travel in mm : 17.50 + Tolerance mm : +- 1.00
	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 400	Rated speed rpm : 1150 Aneroid pressure
Rack travel in mm : 4.20 Tolerance mm : + 0.10	+ hPa : 1600 + Del. quantity
Del. quantity cm3/1000 strokes : 38.0	cm3/1000 strokes : 304.5
Tolerance cm3/1000 strokes : +- 3.0	cm3/1000 strokes : +- 1.5 Check tolerance
Check tolerance cm3/1000s. : + 7.0	cm3/1000s. : +- 5.0 + Spreed
Spreed Tolerance	Tolerance cm3/1000 strokes : 20.0
cm3/1000 strokes : 20.0 Check tolerance	+ Check tolerance - cm3/1000s. : 24.0
cm3/1000s. : 24.0	1
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
	control lever position degree : 110.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0
Rated speed rpm : 1212 guide sleeve	RATED SPEED : 10.90
travel mm : 7.00 Tolerance mm : +- 0.25	+ Rated speed rpm : 1195
Rated speed rpm : 400	+ Tolerance 1/min : +- 5 + rack travel mm : 4.00
guide sleeve	+ Rated speed rpm : 1255
travel mm : 2.59 Tolerance mm : +- 0.25	Tolerance 1/min : + 15
Rated speed rpm : 697 Tolerance mm : +- 0.25	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50 + Rated speed rpm : 1350
Rated speed rpm : 449	+ rack travel mm : 4.00

LOW IDLE

control lever

position degree : 67.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 100

CRT mm min. :> 5.70

Testing:

Rated speed rpm : 400 rack travel mm : 4.20 Tolerance mm : +- 0.10

Rated speed rpm : 475

TORQUE CONTROL

Rated speed rpm : 1150 rack travel mm : 11.95 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1600
rack travel mm : 11.95
Tolerance mm : +- 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 7.40
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 1000 rack travel mm : 10.70 Tolerance mm : +- 0.20

Pressure hPa : 340 rack travel mm : 8.05 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 185.5

Tolerance

cm3/1000 strokes : + 1.5

Check tolerance

cm3/1000s. : +- 5.0

STARTING FUEL DELIVERY

Rated speed rpm : 160

LOW IDLE

Rated speed rpm : 400

Rack travel in mm : 4.20 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 38.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 7.0

Spreed

Tolerance

cm3/1000 strokes : 20.0

Check tolerance

cm3/1000s. : 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.07.97 : ISO 4113

Combination No. : 0 402 646 665

Injection pump

Pump designation: PE6P130A720RS7354 EP type number : 0 412 636 835

Governor

Governer design. : RQV300...950PA1002

: -3K

Governer no.

: 0 421 815 491

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE

Motor

: 8210.42K.3000

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve

: 2 417 413 076

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

Tolerance bar

208.5

: +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

REMARKS

x inside diameter: 3.0 x length mm : 1000

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : +~ 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 12.00

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Check

tolerance °NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm : 11.95

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 242.0

A28

Tolerance + 1.0 + Check tolerance	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
cm3/1000s. : +- 4.0	
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 5.0	<pre>control lever position degree : - 1 Rated speed rpm : 1190</pre>
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 11.00 Tolerance mm : +- 2.70
Rated speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.30 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 32.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 950 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 242.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL Rated speed rpm : 1025 guide sleeve	<pre>control lever position degree : 114.0 tolerance degree : +- 4.0</pre>
travel mm : 9.00 Tolerance mm : +- 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.64	RATED SPEED rack travel mm : 10.90 Rated speed rpm : 1010 Tolerance 1/min : +- 5 Check speed 1/min : +- 10
Tolerance mm : + 0.20	rack travel mm : 4.00
Rated speed rpm : 764 guide sleeve travel mm : 6.22 Tolerance mm : + 0.25	Rated speed rpm : 1110 Tolerance 1/min : +- 15 Check speed 1/min : +- 20
Rated speed rpm : 500 guide sleeve travel mm : 3.78 Tolerance mm : +- 0.25 Rated speed rpm : 1330	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250

LOW IDLE	
control lever position degree tolerance degree	: 69.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 200
CRT mm min.	: > 6.20
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.30 : + 0.10
Rated speed rpm	: 355
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 950 : 11.95 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rom rack travel mm Tolerance mm	: 300 : 10.80 : + 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 950 : 1000 : 11.95 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 950 : - : 8.30 : +- 0.40
MEASUREMENT	

Rated speed rpm	: 950		
Pressure hPa	: 290		
rack travel mm Tolerance mm	: 9.35		
roterance mm	: +- 0.20		
Pressure hPa rack travel mm	: 500 : 11.10		
Tolerance mm	: +- 0.05		
Start interlock			
Rated speed rpm	: > 180 : < 220		
Rated speed rpm	: < 220		
Check speed 1/min	: > 160		
Check			
speed 1/min	: < 240		
FUEL DELIVERY CHA	RACTERISTICS		
Aneroid pressure			
hPa	: 1000		
Rated speed rpm Del. quantity	: 550		
cm3/1000 strokes	: 262.0		
Tolerance cm3/1000 strokes	: +- 3.0		
Check tolerance cm3/1000s.			
CM3/ (UUUS.	: +- 6.0		
Aneroid pressure			
hPa	: -		
Rated speed rpm Del. quantity	: 550		
cm3/1000 strokes Tolerance	: 171.0		
cm3/1000 strokes	: + 1.0		
Check tolerance cm3/1000s.	: +- 4.0		
STARTING FUEL DEL	IVERY		
Rated speed rpm : 100			
rack travel mm Tolerance mm	: 20.25 : + 0.75		
Del. quantity cm3/1000 strokes			
Tolerance			
cm3/1000 strokes Check tolerance	: +- 15.0		
cm3/1000s.	: +- 19.0		

LOW IDLE

Rated speed rpm	:	275
Rack travel in mm Tolerance mm Del. quantity	: +-	5.30 0.10
cm3/1000 strokes Tolerance	:	32.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.07.97 : ISO 4113

Combination No. : 0 402 646 667

Injection pump

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1278K

Governer no. : 0 421 815 509

Cust. part No. : 1310221/1

Customer-spec. information

Customer : DAF : XF 315 M Motor Power KW : 315.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h: +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +-1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : **←** 0.10

Check

tolerance 'NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 13.40 Tolerance mm : +- 0.05

	+ guide sleeve
Del. quantity	travel mm : 3.92
cm3/1000 strokes : 318.0	+ Tolerance mm : + 0.25
	100001 01100 111111
Tolerance	+ Rated speed rpm : 1310
cm3/1000 strokes : +- 1.0	+ guide sleeve
1.0	
Check tolerance	+ travel mm : 13.50
	+ Tolerance mm : + 0.50
cm3/1000s. : +- 4.0	†
Spreed	+ GUIDE SLEEVE POSITION
	+
Tolerance	+
cm3/1000 strokes : 5.0	+ control lever
	position degree : - 1
Check tolerance	+ Rated speed rpm : 1158
cm3/1000s. : 9.0	
	+ Rack travel in mm : 12.00
	+ Tolerance mm : +- 2.70
	1 Total alice limit 2.70
Rated speed rpm : 275	
nated speed (pin : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 3.80	L LOCK FOUND RESTANT AS LOCK FOUND STON
Tolerance mm : + 0.10	T Poted speed now
	Rated speed rpm : 980
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 17.0	hPa : 1500
Tolerance	+ Del. quantity
cm3/1000 strokes : +- 3.0	+ cm3/1000 strokes : 318.0
Check tolerance	+ Tolerance
cm3/1000s. : +- 6.0	+ cm3/1000 strokes : +- 1.0
Spreed	+ Check tolerance
Tolerance	+ cm3/1000s. : +- 4.0
cm3/1000 strokes : 8.0	Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0
	+ Check tolerance
	+ cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	T (1115/10003 7.0
WITH GOVERNOR	T
WITH GOVERNOR	T _
	CONTROL I FUED
CHARLE CLEENE TRAVEL	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	†
Data di anno di anno di 1077	t control lever
Rated speed rpm : 1077	position degree : 119.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 10.24	+
Tolerance mm : +- 0.15	+ RATED SPEED
	rack travel mm : 12.40
Rated speed rpm : 275	+ Rated speed rpm : 1040
guide sleeve	+ Tolerance 1/min : + 5
travel mm : 2.04	+ Check
Tolerance mm : +- 0.20	+ speed 1/min : +- 10
	+
Rated speed rpm : 704	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1145
travel mm : 6.53	+ Tolerance 1/min : +- 15
Tolerance mm : +- 0.25	+ Check
TOTEL WILL THE D.C.	
Poted around from . /00	speed 1/min : +- 20
Rated speed rpm : 400	T mode through me
	+ rack travel mm : 0.50

Tolerance mm Rated speed rpm	: +- 0.50 : 1275	Rated speed rpm : 980 Pressure hPa : 1500 rack travel mm : 13.40 Tolerance mm : +- 0.05
LOW IDLE		Rated speed rpm : 980 Pressure hPa : - rack travel mm : 8.55 Tolerance mm : + 0.20
position degree tolerance degree		MEASUREMENT
Setting point w/o		Rated speed rpm : 980
Rated speed rpm		Pressure hPa : 520 rack travel mm : 12.20 Tolerance mm : + 0.05
CRT mm min.	: > 6.60	Pressure hPa : 210
Testing:		rack travel mm : 9.80 Tolerance mm : + 0.15
Rated speed rpm rack travel mm Tolerance mm	: 275 : 3.80 : + 0.10	
Rated speed rpm	: 300	+ FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 13.40 : +- 0.05 : 750 : 13.35 : +- 0.05 : 700 : 13.10 : +- 0.10 : 600 : 12.55 : +- 0.10 : 500 : 12.10 : +- 0.10 : 1000 : 13.40	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 342.0 Tolerance cm3/1000strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 195.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance mm ANEROID/ALTITUDE	: +- 0.10	+ cm3/1000s. : +- 4.0 + Spreed + Tolerance + cm3/1000 strokes : 8.0
COMPENSATOR TEST		Check tolerance cm3/1000s. : 12.0
SETTING		‡

LOW IDLE

Rated speed rpm	:	275	
	: : +	3.80 0.10	
Del. quantity cm3/1000 strokes Tolerance	:	17.0	
cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 01.07.97 Test oil : ISO 4113

Combination No. : 0 402 646 677

Injection pump

Pump designation : PE6P12OA32ORS7361 EP type number : 0 412 626 939

Governor

Governer design. : RQV275...1150PA1349K

Governer no. : 0 421 815 556

Cust. part No. : 1322507

Customer-spec. information

Customer : DAF

Motor : RS/GS 245 M Power KW : 245.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 140 Tolerance L/h : + 10.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 14.65

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 14.30

Tolerance mm : +- 0.05

B08

	+ guide sleeve
Del. quantity	+ travel mm : 3.40
cm3/1000 strokes : 258.0	+ Tolerance mm : +- 0.25
	+
Tolerance	+ Rated speed rpm : 1427
cm3/1000 strokes : +- 1.0	+ guide sleeve
	† travel mm : 12.00
Check tolerance	+ Tolerance mm : +- 0.25
cm3/1000s. : +- 4.0	+
	+ Rated speed rpm : 1520
Spreed	+ guide sleeve
W. Laman	+ travel mm : 13.50
Tolerance 5.0	+ Tolerance mm : +- 0.50
cm3/1000 strokes : 5.0	†
Charle de Langue	CUIDE OF FEUE DOCUTION
Check tolerance cm3/1000s. : 9.0	- GUIDE SLEEVE POSITION
CM37 (0003. : 9.0	†
	t control lever
Rated speed rpm : 275	+ position degree : - 1 + Rated speed rpm : 1384
Rated Speed (pill : 2/)	T Nated Speed (pill : 1564
Rack travel in mm : 5.00	Rack travel in mm : 13.65
Tolerance mm : + 0.10	+ Tolerance mm : + 1.30
Del. quantity	10001 01100 11111
cm3/1000 strokes : 16.0	
Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 2.0	+
Check tolerance	+ Rated speed rpm : 850
cm3/1000s. : +- 5.0	+ Aneroid pressure
Spreed	+ hPa : 1500
Tolerance	1 Del. quantity
cm3/1000 strokes : 8.0	+ cm3/1000 strokes : 258.0
Check tolerance	+ Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
	+ cm3/1000s. : +- 4.0
(B) SETTING OF INJECTION PUMP	+ Spreed
WITH GOVERNOR	Tolerance
	+ cm3/1000 strokes : 5.0
	+ Check tolerance
GUIDE SLEEVE TRAVEL	- cm3/1000s. : 9.0
Poted aread page 1247	
Rated speed rpm : 1217 guide sleeve	†
travel mm : 8.07	CONTROL LEVER
Tolerance mm : + 0.15	T CONTROL LEVER
Total differential 1. 1 - 0.15	T control lever
Rated speed rpm : 275	position degree : 114.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 1.71	+ total and degree
Tolerance mm : +- 0.20	RATED SPEED
	rack travel mm : 13.90
Rated speed rpm : 940	Rated speed rpm : 1215
guide sleeve	+ Tolerance 1/min : +- 5
travel mm : 5.44	Check
Tolerance mm : +- 0.25	+ speed 1/min : +- 10
	+
Rated speed rpm : 520	+ rack travel mm : 4.00
	+ Rated speed rpm : 1340

+- 15 +- 20 0.70 +- 0.70 1450
72.0 +- 4.0
bumper spring
175
> 7.00
275 5.00 +- 0.10
375
850 14.30 +- 0.05
1130 14.90 + 0.05
1025 14.50 +- 0.10
650 13.20 +- 0.10
500 12.80 +- 0.10
1150 14.90 +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm	:	1130
Pressure hPa	:	1500
rack travel mm	:	14.90
Tolerance mm	:	+- 0.05
rack travel mm	:	14.9

Rated speed rpm : 1130
Pressure hPa : rack travel mm : 3.40
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm	: 1130
Pressure hPa	: 600
rack travel mm	: 13.90
Tolerance mm	: +- 0.05
Pressure hPa	: 250
rack travel mm	: 10.45
Tolerance mm	: + 0.10

FUEL DELIVERY CHARACTERISTICS

FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 1130
cm3/1000 strokes Tolerance	: 242.0
cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s.	: +- 5.0
Aneroid pressure	
hPa	: -
Rated speed rpm Del. quantity	: 600
cm3/1000 strokes Tolerance	: 131.0
cm3/1000 strokes	: ← 1.0

Check tolerance cm3/1000s. : +- 4.0

LOW IDLE

Rated speed rpm	:		275
Rack travel in mm Tolerance mm Del. quantity	-	+	5.00 0.10
714000	:		16.0
cm3/1000 strokes Check tolerance	:	+-	2.0
cm3/1000s. Spreed	:	+-	5.0
Tolerance cm3/1000 strokes Check tolerance	:		8.0
cm3/1000s.	•		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.06.97 Test oil : ISO 4113

Combination No. : 0 402 696 032

Injection pump

Pump designation : PE6H12O/32OLS16 EP type number : 0 412 626 005

Governor

Governer design. : RE36

Governer no. : 0 421 890 369

Cust. part No. : 0250746502

Customer-spec. information
Customer : MB-NFZ
Motor : OM 441 LA

TEST BENCH REQUIREMENTS

Inlet line : 3.2 ELAB

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.0
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 7.00 Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 0.50

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-60-120-180-240

: -300

Tolerance : +-0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 6

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

	Tank with a second of
TESTING & SETTING RACK TRAVEL SENSOR POSITION	Test with control rod in stop position
Engine speed min-1: 0	+ Engine speed min-1: 60 + Amplitude V : 1.4 + Tolerance V : +/- 0.6
Setting point (P, R and H pump)	Check tolerance V ; +/- 1.20
Uact V : 3.100 CRT mm : 13.C0 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10	Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4
Check value (P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
Uact V : 1.700	TEST POINT V1
CRT mm : 6.15 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30	Rated speed rpm : 750 Uact V : 3.000 Prestroke solenoid Stroke mm : 7.00
Setting point (M pump)	+ Del. quantity + cm3/1000 strokes : 375.0 + Tolerance + cm3/1000 strokes : +- 1.0
Uact V : 3.100 CRT mm : 12.50 Tolerance mm : +/- 0.05	Check tolerance + cm3/1000s. : +- 4.0 + Spreed + Tolerance
Check tolerance mm : +/- 0.10	cm3/1000 strokes : 5.0 Check tolerance
Check value (M pump)	+ cm3/1000s. : 9.0 + FUEL DELIVERY CHARACTERISTICS +
Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 1050 Uact V : 3.000 Prestroke solenoid Stroke mm : 7.00
tolerance mm : +/- 0.30	+ Del. quantity + cm3/1000 strokes : 339.0
Stop position Uact V : Value with	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
deenergised adjusting magnet and control rod in stop position.	cm3/1000s. : +- 6.0
CRT mm : 0.75 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 550 Uact V : 2.800 Prestroke solenoid
tolerance mm : +/- 0.35	Stroke mm : 8.70 Del. quantity
ENGINE-SPEED SENSOR	cm3/1000 strokes : 367.0 Tolerance
(All P and R pumps not H and M pumps)	cm3/1000 strokes : +- 3.0 Check tolerance
	+ cm3/1000s. : +- 6.0

TEST POINT L1

Rated speed rpm 300 Uact V 1.500 Tolerance Volt : +- 0.060 Check tolerance Volt : +- 0.060 Prestroke solenoid Stroke mm 8.00 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 1.900
Prestroke solenoid
Stroke mm : 10.00
Del. quantity
cm3/1000 strokes : 106.0
Tolerance
cm3/1000 strokes : +- 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 30.06.97 : ISO 4113

Combination No. : 0 402 696 033

Injection pump

Pump designation : PE6H12O/32OLS14 EP type number : 0 412 626 004

Sovernor

Governer design. : RE36

Governer no. : 0 421 890 369

Cust. part No. : 0250745502

Customer-spec. information Customer : MB-NFZ Motor : OM 441 LA

TEST BENCH REQUIREMENTS

Inlet line : 3.2 ELAB

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery under Section C.

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Préstroke mm 7.00 : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.1C

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

Phasing : 0-60-120-180-240

: -300

Tolerance : → 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 6

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

	Took with southed and
TESTING & SETTING RACK TRAVEL SENSOR POSITION	+ Test with control rod + in stop position +
Engine speed min-1: 0	+ Engine speed min-1: 60 + Amplitude V : 1.4 + Tolerance V : +/- 0.6
Setting point (P, R and H pump)	Check tolerance V : +/- 1.20
Uact V : 3.100 CRT mm : 13.00 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10	Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4
Check value (P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
Uact V : 1.700	TEST POINT V1
CRT mm : 6.15 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 750 Uact V : 3.000 Prestroke solenoid
tolerance mm : +/- 0.30	+ Stroke mm : 7.00 + Del. quantity + cm3/1000 strokes : 375.0
Setting point (M pump)	Tolerance + cm3/1000 strokes : +- 1.0
Uact V : 3.100 CRT mm : 12.50 Tolerance mm : +/- 0.05	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
Check tolerance mm : +/- 0.10	cm3/1000 strokes : 5.0 Check tolerance
Check value (M pump)	+ cm3/1000s. : 9.0 + FUEL DELIVERY CHARACTERISTICS +
Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25	Rated speed rpm : 1050 Uact V : 3.000 Prestroke solenoid
Check tolerance mm : +/- 0.30	+ Stroke mm : 7.00 + Del. quantity + cm3/1000 strokes : 339.0
Stop position	+ cm3/1000 strokes : 339.0 + Tolerance + cm3/100C strokes : +- 3.0
Uact V: Value with deenergised adjusting magnet and control rod in	Check tolerance cm3/1000s. :+- 6.0
stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 550 Uact V : 2.800 Prestroke solenoid
tolerance mm : +/- 0.35	Stroke mm : 8.70 Del. quantity
ENGINE-SPEED SENSOR	+ cm3/1000 strokes : 367.0 + Tolerance
(All P and R pumps not H and M pumps)	+ cm3/1000 strokes : +- 3.0 - Check tolerance - cm3/1000s. : +- 6.0
	1 01107 10000.

TEST POINT L1

Rated speed rpm 300 Uact V 1.500 Tolerance Volt : + 0.060Check tolerance Volt : + 0.060Prestroke solenoid Stroke mm 8.00 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : + 3.0Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 1.900
Prestroke solenoid
Stroke mm : 10.00
Del. quantity
cm3/1000 strokes : 106.0
Tolerance
cm3/1000 strokes : +- 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 30.06.97 : ISO 4113

Combination No. : 0 402 698 032

Injection bumb

Pump designation : PE8H12D/32DLS3-1 EP type number : 0 412 628 005

Governor

Governer design. : RE36

Governer no. : 0 421 890 369

Cust. part No. : 0250746502

Customer-spec. information Customer : MB-NFZ : OM 442 LA Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.2 EHAB

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar :

3.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm :

600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 7.00 : +- 0.05 Tolerance mm

Check

tolerance mm : ÷ 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 0.50

Firing order : 8-- 7- 2- 6- 3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance

: +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 8

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

	Tank (tit) and ()
TESTING & SETTING RACK TRAVEL SENSOR POSITION	+ Test with control rod + in stop position +
Engine speed min-1: 0	+ Engine speed min-1: 60 + Amplitude V : 1.4 + Tolerance V : +/- 0.6
Setting point (P, R and H pump)	+ Check + tolerance V : +/- 1.20
Uact V : 3.100 CRT mm : 13.00 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10	Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4
Check value (P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
Uact V : 1.700	T TEST POINT V1
CRT mm : 6.15 Tolerance mm : +/- 0.25 Check	+ Rated speed rpm : 750 + Uact V : 2.800 + Prestroke solenoid
tolerance mm : +/- 0.30	+ Stroke mm : 7.40 + Del. quantity + cm3/1000 strokes : 341.0
Setting point (M pump)	+ Tolerance + cm3/1000 strokes : +- 1.0
Uact V : 3.100 CRT mm : 12.50 Tolerance mm : +/- 0.05	Check tolerance cm3/1000s. : +- 4.0 Spreed
Check tolerance mm : +/- 0.10	+ Tolerance + cm3/1000 strokes : 5.0 + Check tolerance
Chack value (M pump)	+ cm3/1000s. : 9.0 + FUEL DELIVERY CHARACTERISTICS +
Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25	Rated speed rpm : 950 Uact V : 2.900 Prestroke solenoid
Check tolerance mm : +/- 0.30	Stroke mm : 8.00 Del. quantity cm3/1000 strokes : 333.0
Stop position	Tolerance + cm3/1000 strokes : +- 3.0
Uact V : Value with deenergised adjusting magnet and control rod in	- Check tolerance - cm3/1000s. : +- 6.0
stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 550 Uact V : 2.700 Prestroke solenoid
tolerance mm : +/- 0.35	+ Stroke mm : 9.50 + Del. quantity
ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)	cm3/1000 strokes : 351.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
·· = · · · · · · · · · · · · · · · · ·	+ cm3/1000s. : +- 6.0

TEST POINT L1

Rated speed rpm 300 Uact V 1.500 Tolerance Volt : **←** 0.060 Check tolerance Volt : + 0.060Prestroke solenoid Stroke mm 8.00 Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +- 3.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Jact V : 1.900

Prestroke solenoid

Stroke mm : 10.00

Del. quantity

cm3/1000 strokes : 108.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 02,07,97

Test oil : ISO 4113

Combination No. : 0 402 746 601

Injection pump

Pump designation : PES6P120A720RS7389

EP type number : 0 412 726 944

Governor

Governer design. : RQ275/1050PA1021-4

Governer no. : 0 421 801 795

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE

Motor

: 8460.41E.711

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 145 Tolerance l/h : +- 10.0

Test nozzle holde assembly

: 1 688 901 105

Opening pressure

Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

3.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.15 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

tolerance °NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 11.05

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 168.0	Tolerance cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : +- 1.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : +- 4.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed	cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : 5.0	RATED SPEED rack travel mm : 10.00 Rated speed rpm : 1110
Check tolerance cm3/1000s. : 9.0	Tolerance 1/min : +- 8 rack travel mm : 4.00
	Rated speed rpm : 1170 Tolerance 1/min : +- 15
Rated speed rpm : 275	rack travel mm : 0.50
Rack travel in mm: 4.60 Tolerance mm: +- 0.10 Del. quantity	Tolerance mm : +- 0.50 Rated speed rpm : 1350
cm3/1000 strokes : 23.0 -	
cm3/1000 strokes : +- 3.0	LOW IDLE
Spreed Tolerance	control lever
cm3/1000 strokes : 8.0 + Check tolerance	position degree : 73.0 tolerance degree : + 4.0
cm3/1000s. : 12.0	Setting point w/out bumper spring
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 175
	CRT mm min. : > 6.10
GUIDE SLEEVE POSITION	Testing:
control lever	Rated speed rpm : 275 rack travel mm : 4.60 Tolerance mm : +- 0.10
position degree : 109 Rated speed rpm : 600	rack travel mm : 2.00
Rack travel in mm: 20.00	Rated speed rpm : 356 Tolerance 1/min : +- 20
	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1050 rack travel mm : 11.05
Rated speed rpm : 1050 Aneroid pressure	Tolerance mm : +- 0.05
hPa : 900 + Del. quantity + cm3/1000 strokes : 168.0 +	Rated speed rpm : 600 rack travel mm : 11.10 Tolerance mm : +- 0.10
+	

ANEROID/ALTITUDE COMPENSATOR TEST				
SETTING				
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	:	+-	600 900 11.05 0.05	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	:	+	9.20 0.10	
MEASUREMENT				
Rated speed rpm	:		600	
Pressure hPa rack travel mm Tolerance mm	:	+-	350 10.25 0.05	
Start interlock				
Rated speed rpm Rated speed rpm	:	> <	100 195	
Check speed 1/min Check	:	>	80	
speed 1/min	:	<	215	
FUEL DELIVERY CHA	RA	CTE	RISTICS	
Rated speed rpm Del. quantity	:		600	
cm3/1000 strokes Tolerance	:		178.5	
cm3/1000 strokes Check tolerance	:	+-	3.0	
cm3/1000s.	:	+-	6.0	_
Aneroid pressure	:		_	
Rated speed rpm Del. quantity	•		600	
cm3/1000 strokes Tolerance	:		124.0	
cm3/1000 strokes	:	+-	1.0	

Check tolerance cm3/1000s.	: +-	4.0	
STARTING FUEL DEL	IVERY		
Rated speed rpm Del. quantity	:	100	
cm3/1000 strokes Tolerance	:	170.0	
cm3/1000 strokes Check tolerance	: +-	15.0	
cm3/1000s.	: -	19.0	
LOW IDLE		•	
Rated speed rpm	:	275	
Rack travel in mm Tolerance mm	: +-	4.60 0.10	
Del. quantity cm3/1000 strokes Tolerance	:	23.0	
cm3/1000 strokes Check tolerance	; +-	3.0	
cm3/1000s. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes	:	8.0	
Check tolerance cm3/1000S.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : Test oil :

: 30.06.97 : ISO 4113

Combination No. : 0 402 796 033

Injection pump

Pump designation : PES6H12O/72OLS18 EP type number : 0 412 726 010

Governor

Governer design. : RE36

Governer no. : 0 421 890 370

Cust. part No. : 0250745702

Customer-spec. information
Customer : MB-NFZ
Motor : OM 447 hla

TEST BENCH REQUIREMENTS

Inlet line : 3.2 EHAB

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 7.00
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

: -3:00

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 6

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION
Engine speed min-1: 0
Setting point (P, R and H pump)
Uact V : 3.100 CRT mm : 13.00 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10
Check value (P, R and H pump)
Uact V : 1.700 CRT mm : 6.15 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30
Setting point (M pump)
Uact V : 3.100 CRT mm : 12.50 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10
Check value (M pump)
Uact V : 1.700 CRT mm : 5.50 Tolerance mm : ÷/- 0.25 Check tolerance mm : +/- 0.30
Stop position
Uact V: Value with deenergised adjusting magnet and control rod in
stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35
ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Engine speed min-1: 60 Amplitude V : 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20
Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4
(C) INJECTION PUMP WITH POSITIONER
TEST POINT V1
Rated speed rpm : 800 Uact V : 2.650 Prestroke solenoid
Stroke mm : 9.00
Del. quantity cm3/1000 strokes : 302.0
Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000S. : 4.0 Spreed
Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000s. : 9.0 FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 1100 Uact V : 2.750
Prestroke solenoid Stroke mm : 6.00
Del. quantity cm3/1000 strokes : 302.0
Tolerance cm3/1000 strokes : +- 5.0
Check tolerance cm3/1000s. : +- 8.0
(11137 10003 += 8.0
Rated speed rpm : 550 Uact V : 2.350
Prestroke solenoid Stroke mm : 9.00
Del. quantity cm3/1000 strokes : 272.0
Tolerance cm3/1000 strokes : +- 8.0
Check tolerance cm3/1000s. : +- 11.0
1,10000

Test with control rod in stop position

TEST POINT L1

Rated speed rpm Uact V	:	300 1,440
Tolerance Volt	:	+- 0.060
Check tolerance Volt	:	+- 0.060
Prestroke solenoi	ď	
Stroke mm Del. quantity	:	9.00
cm3/1000 strokes	:	25.0
Tolerance cm3/1000 strokes	•	+- 3.0
Spreed	•	
Tolerance cm3/1000 strokes	:	6.0
Check tolerance	•	-
cm3/1000s.	:	9.0

STARTING FUEL DELIVERY

Rated speed rpm	:	100
Uact V	:	1.900
Prestroke solenoi	d	
Stroke mm	:	9.00
Del. quantity		
cm3/1000 strokes	:	104.0
Tolerance		
cm3/1000 strokes	: +	10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

see microcard(s) W40U/...

Edition : 08.07.97 Test oil : ISO 4113

Combination No. : 0 402 066 710

Injection pump

Pump designation : PES6P110A120RS3357

EP type number : 0 412 016 754

Governor

Governer design. : RSV400...900P4A633

Governer no. : 0 421 833 541

Cust. part No. : 3931255

Customer-spec. information

Customer : CDC
Motor : 6CTA F

Motor : 6CTA ELITE Power KW : 207.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.63
Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.75

Start of delivery blocking

°NW after s.o.d. : 7.75Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.35 Tolerance mm : +- 0.05

1	Aneroid pressure
Del. quantity	hPa : -
cm3/1000 strokes : 213.0	Del. quantity
Tolerance	cm3/1000 strokes : 213.0 Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : +- 1.0
	Check tolerance
Check tolerance	cm3/1000s. : +- 3.0
cm3/1000s. : +- 3.0 ,	Spreed Tolerance
Spreed	cm3/1000 strokes : 4.0
+	Check tolerance
Tolerance +	cm3/1000S. : 7.5
cm3/1000 strokes : 4.0	
Check tolerance	
cm3/1000s. : 7.5	CONTROL LEVER
	and the later of
İ	control lever position degree : 102.0
Rated speed rpm : 400	tolerance degree : +- 4.0
+	
Rack travel in mm: 6.20	RATED SPEED
Tolerance mm : +- 0.20 + Del. quantity +	rack travel mm : 12.30 Rated speed rpm : 960
cm3/1000 strokes : 24.0	Tolerance 1/min : +- 5
Tolerance	To condition to mility
cm3/1000 strokes : +- 2.0	rack travel mm : 6.40
Check tolerance	Rated speed rpm : 990
cm3/1000s. : + 4.5 Spreed	Tolerance 1/min : +- 5
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 6.0	Tolerance mm : + 0.55
Check tolerance	Rated speed rpm : 1100
cm3/1000s. : 9.0	rack travel mm : 6.40
I	Rated speed rpm : 990
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 15
WITH GOVERNOR	
+	
<u> </u>	
GUIDE SLEEVE POSITION	LOW IDLE
+	
t description of the second of	annthal layer
control lever + position degree : - 3 +	control lever position degree : 77.0
Rated speed rpm : 800	tolerance degree : +- 4.0
+	_
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : + 0.20	Grad : 25.0 tolerance degree : + 6.0
governor spring	tolerance degree : +- 6.0
pre-tension +	Setting point w/out bumper spring
click setting x : 4.00	
	Rated speed rpm : 400
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 5.70 Tolerance mm : +- 0.10
T TOLL LOAD DELIVERY AT TOLL LOAD STOP	rocci arico imir
Rated speed rpm : 900	Rated speed rpm : 100

CRT mm min. : < 19.00

Testing:

Rated speed rpm : 400 rack travel mm : 6.20 Tolerance mm : + 0.20

TORQUE CONTROL

Rated speed rpm : 900 rack travel mm : 13.35 Tolerance mm : +--- 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 21.00 Tolerance mm : + 0.50 Del. quantity

cm3/1000 strokes : 165.0

Tolerance
cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 400

Rack travel in mm : 6.20 Tolerance mm : + 0.20

Del. quantity

cm3/1000 strokes : 24.0

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 03.07.97

Test oil

: ISO 4113

Combination No. : 0 402 736 907

Injection pump

Pump designation : PES6P120A120RS7342

EP type number : 0 412 726 967

Governor

Governer design. : RQV450...1100PA1334K Governer no. : 0 421 815 549

Cust. part No. : 3931940

Customer-spec. information

Customer : CDC

Motor

: 6CTA-A

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

tenip. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar :

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

Tolerance bar : +- 1.5

: 208.5

Test lines : 1 680 750 015

Outside diameter : 6.0

C02

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 4.40 Tolerance mm : +- 0.03

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 14.25

Tolerance mm : +- 0.05

+	guide sleeve
Del. quantity cm3/1000 strokes : 227.0	travel mm : 13.50 Tolerance mm : + 0.50
Tolerance cm3/1000 strokes : + 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 1100 Aneroid pressure
Spreed	hPa : 900 Del. quantity
Tolerance	cm3/1000 strokes : 227.0 Tolerance
cm3/1000 strokes : 5.0	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : 9.0	cm3/1000s. : +- 4.0 Spreed
	Tolerance cm3/1000 strokes : 5.0
Rated speed rpm : 450	Check tolerance cm3/1000s. : 9.0
Rack travel in mm: 6.40	
Tolerance mm : + 0.20 + Del. quantity	CONTROL LEVER
cm3/1000 strokes : 31.0	CONTROL LEVER
Tolerance	control lever
cm3/1000 strokes : + 3.0	position degree : 117.0
Check tolerance + 5.0 +	tolerance degree : +- 4.0
Spreed	RATED SPEED
Tolerance	rack travel mm : 13.20
cm3/1000 strokes : 8.0	Rated speed rpm : 1170
Check tolerance cm3/1000s. : 12.0	Tolerance 1/min : +- 15
- 12.5	rack travel mm : 8.00
	Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : +- 5
+	rack travel mm : 0.50
CHINE CLEENE TRAVEL	Tolerance mm : +- 0.50
GUIDE SLEEVE TRAVEL	Rated speed rpm : 1350
Rated speed rpm : 1162	
guide sleeve	
travel mm : 7.49 + Tolerance mm : + 0.15 +	LOW IDLE
+	EOW TOLL
Rated speed rpm : 450	
guide sleeve + travel mm : 1.33 +	control lever position degree : 76.5
Tolerance mm : +- 0.20	tolerance degree : +- 4.0
+	
Rated speed rpm : 860	Control lever difference
guide sleeve + travel mm : 4.55 +	Grad : 40.5 tolerance degree : +- 6.0
Tolerance mm : +- 0.25	-
Rated speed rpm : 1560	Setting point w/out bumper spring
+	Rated speed rpm : 375

CRT mm min. : > 7.70	+ Che + spe +	eck ed 1/min	: < 400
Testing: Rated speed rpm : 450	+ + FUE	L DELIVERY CHAR	ACTERISTICS
rack travel mm : 6.40 Tolerance mm : +- 0.20	Ane	eroid pressure	
Rated speed rpm : 525	+ nPa + Rat + Del	ed speed rpm quantity 3/1000 strokes	: 900 : 750
TORQUE CONTROL Rated speed rpm : 1100	+ Tol + cm3	erance 3/1000 strokes	
rack travel mm : 14.25 Tolerance mm : +- 0.05	→ Spr	eck tolerance 5/1000s. reed	: +- 6.0
Rated speed rpm : 750 rack travel mm : 13.55 Tolerance mm : + 0.10	Tol	erance 3/1000 strokes eck tolerance	: 8.0
Rated speed rpm : 500 rack travel mm : 13.60 Tolerance mm : + 0.20	+ cm3	3/1000s.	: 12.0
Tolerance mm : + 0.20	∔ hPa		: -
ANEROID/ALTITUDE COMPENSATOR TEST	+ Del + cm3	ed speed rpm . quantity 3/1000 strokes erance	
SETTING	→ cm3	7/1000 strokes ck tolerance 7/1000s.	: +- 1.0
Rated speed rpm : 1700 Pressure hPa : 900	+ cm3	71000S.	: +- 3.0
Rated speed rpm : 1000 Pressure hPa : -	STA	RTING FUEL DELI	VERY
rack travel mm : 12.80 Tolerance mm : + 0.20	+ rac	ed speed rpm k travel mm erance mm	
MEASUREMENT Rated speed rpm : 1100	+ cm3	. quantity //1000 strokes erance	: 156.0
Pressure hPa : 400 rack travel mm : 13.80	+ сліЗ + Сhe	7/1000 strokes ck tolerance 7/1000s.	
Tolerance mm : +- 0.20	+	710003.	23.0
Pressure hPa : 300 rack travel mm : 13.40 Tolerance mm : +- 0.20	+	IDLE	
Start interlock	+	ed speed rpm k travel in mm	
Rated speed rpm : > 100 Rated speed rpm : < 390	+ Tol + Del	erance mm . quantity /1000 strokes	: +- 0.20
Check speed 1/min : > 80	+ Tol	erance /1000 strokes	

CO4

Check tolerance cm3/1000s.

: **←** 5.0

Spreed

Tolerance

8.0

cm3/1000 strokes : Check tolerance cm3/1000s. :

12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 30,06,97 : ISO 4113

Combination No. : 0 402 744 806

Injection pump

Pump designation : PES4P120A320RS7431 EP type number : 0 412 724 805

Governor

Governer design. : RQV325...1500PA1333

: -1K

Governer no.

: 0 421 815 555

Cust. part No. : 3393633

Customer-spec. information Customer : CDC

Motor : 4BTA-A

Power KW

: 179.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar

Tolerance bar : + 1.5

Test !ines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm : 3.90 Tolerance mm : + 0.05

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 11.00

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1500

Rack travel in mm : 15.25

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 208.5

Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 4.0	- FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	•
Tolerance	- Rated speed rpm : 1500 - Aneroid pressure
cm3/1000 strokes : 8.0	hPa : 900 Del. quantity
Check tolerance cm3/1000s. : 12.0	cm3/1000 strokes : 208.5 Tolerance
	cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm : 325	cm3/1000s. : +- 4.0 - Spreed - Tolerance
Rack travel in mm : 7.80 Tolerance mm : +- 0.10	- cm3/1000 strokes : 8.0 - Check tolerance
Del. quantity = 20.0	cm3/1000s. : 12.0
Tolerance	•
cm3/1000 strokes : + 3.0 + Check tolerance	- CONTROL LEVER
cm3/1000s. : +- 5.0 +- 5.0	control lever
Tolerance cm3/1000 strokes : 4.0	position degree : 116.5 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 8.0	· RATED SPEED
- CIIIS / 10003.	rack travel mm : 14.25
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1565 Tolerance 1/min : +- 5
WITH GOVERNOR	rack travel mm : 5.50
CHYPIC CLEENE TRAVEL	Rated speed rpm : 1720
GUIDE SLEEVE TRAVEL	Tolerance 1/min : +- 15
Rated speed rpm : 1555 guide sleeve	rack travel mm : 0.50 Tolerance mm : +- 0.50
travel mm : 9.02	Rated speed rpm : 1800
Tolerance mm : +- 0.15	
Rated speed rpm : 325 guide sleeve	
travel mm : 1.21	LOW IDLE
Tolerance mm : + 0.20	
Rated speed rpm : 1007	control lever
guide sleeve + travel mm : 5.41 +	position degree : 75.0 tolerance degree : +- 4.0
Tolerance mm : +- 0.25	
Rated speed rpm : 560	Control lever difference Grad : 41.5
guide sleeve travel mm : 3.15	tolerance degree : +- 6.0
Toterance mm : +- 0.25	Setting point w/out bumper spring
Rated speed rpm : 1970	Rated speed rpm : 275

		}	Dal guantity	
CRT mm min.	: > 8.10	Ŧ	Del. quantity cm3/1000 strokes	: 195.0
Testing:		‡	Tolerance cm3/1000 strokes	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 7.80	† †	Check tolerance cm3/1000S. Spreed	: +- 6.0
		‡	Tolerance cm3/1000 strokes	
Rated speed rpm	: 400	+	Check tolerance cm3/1000s.	
TORQUE CONTROL Rated speed rpm rack travel mm		+ + + +	Aneroid pressure	· -
Tolerance mm	: +- 0.05	<u> </u>	Rated speed rpm Del. quantity	: 750
Rated speed rpm	: 1100 : 14.80	<u> </u>	cm3/1000 strokes Tolerance	: 126.0
rack travel mm Tolerance mm	: +- 0.20	-	cm3/1000 strokes Check tolerance	: +- 1.0
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.90	Ŧ	cm3/1000s.	: +- 3.0
loterance mm	: +- 0.20	‡		
ANEROID/ALTITUDE	· · · · · · · · · · · · · · · · · · ·	+	STARTING FUEL DEL	IVERY
COMPENSATOR TEST		+	Rated speed rpm rack travel mm	: 100 : 11.60
SETTING		‡	Tolerance mm Del. quantity	
Rated speed rpm	: 1500	‡	cm3/1000 strokes Tolerance	: 122.0
Pressure hPa	: -	‡	cm3/1000 strokes Check tolerance	: +- 20.0
Rated speed rpm Pressure hPa	: 750 : -	‡	cm3/1000s.	: +- 25.0
rack travel mm Tolerance mm	: 12.20	‡		
MEASUREMENT		‡	LOW IDLE	
Rated speed rpm	: 1500	‡	Rated speed rpm	: 325
Pressure hPa rack travel mm Tolerance mm	: 13.40		Rack travel in mm Tolerance mm Del. quantity	
Pressure hPa		1	cm3/1000 strokes Tolerance	: 20.0
rack travel mm Tolerance mm	: 13.00	+	cm3/1000 strokes Check tolerance	: +- 3.0
TOTAL TOTAL	. 0.20	+	cm3/1000S. Spreed	: +- 5.0
FUEL DELIVERY CH	ARACTERISTICS		Tolerance cm3/1000 strokes Check tolerance	: 4.0
Aneroid pressure hPa Rated speed rpm	: 900	 	cm3/1000s.	: 8.0
nacea speed (pill	. ,,,,,,	T		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26.06.97 : ISO 4113

Combination No. : 0 402 796 813

Injection pump

Pump designation : PES6P120A720RS7356

EP type number : 0 412 726 919

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 61658

Customer-spec. information

Customer : DEERE
Motor : 6081 HF001
Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

208.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 9.75 Tolerance : +- 0.50 Check

tolerance °NW : ← 0.75

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TECTING 8 SETT	THE DARK TRAVEL OFFICER	+ Test with control rod
POSITION	ING RACK TRAVEL SENSOR	in stop position
Engine speed m	in-1: 0	+ Engine speed min-1: + Amplitude V :
		+ Tolerance V : +/
Setting point (P, R and H pu	mo)	+ Check + tolerance V : +/
,		+
Uact V	: 3.100	Engine speed min-1:
CRT mm	: 13.00	Difference
Tolerance mm Check	: +/- 0.05	+ Amplitude to
tolerance mm	: +/- 0.10	+ Amplitude V : ma
coceratice likit	. +/- 0.10	Ī
Check value		
(P, R and H pu	mp)	(C) INJECTION PUMP WIT
		TEST POINT V1
Uact V	: 1.700	I rest rotht vi
CRT mm	: 6.15	Rated speed rpm :
Tolerance mm		+ Uact V :
Check		+ Del. quantity
tolerance mm	: +/- 0.30	+ cm3/1000 strokes :
		+ Tolerance
6 .1		cm3/1000 strokes : +-
Setting point (M pump)		Check tolerance
(M pulip)		+ cm3/1000s. : + + Spreed
Uact V	: 3.100	Tolerance
CRT mm	: 12.50	- cm3/1000 strokes :
Tolerance mm	: +/- O.O5	+ Check tolerance
Check		+ cm3/1000s. :
tolerance mm	: +/- 0.10	FUEL DELIVERY CHARACTE
Check value		Ī
(qiiliq M)		Rated speed rpm :
ar transfer		+ Uact V :
Uact V	: 1.700	+ Del. quantity
CRT mm	: 5.50	+ cm3/1000 strokes :
Tolerance mm	: +/- 0.25	+ Tolerance
Check	0.70	+ cm3/1000 strokes : +-
tolerance mm	: +/- 0.30	+ Check tolerance + cm3/1000s. : +-
Stop position		+ Spreed
5 COP POST CTOIT		Tolerance
Uact V	: Value with	+ cm3/1000 strokes :
	energised adjusting magnet	+ Check tolerance
	and control rod in	+ cm3/1000s. :
	stop position.	+
CRT mm	: 0.75	+ TEST POINT L1
Tolerance mm	: +/- 0.25	Dataday and and
Check tolerance mm	: +/- 0.35	+ Rated speed rpm :
toterance min	. 47- 0.33	+ Uact V : + Tolerance Volt : +~
		Check tolerance
ENGINE-SPEED SI	ENSOR	+ Volt :+-
(All P and R pu		+ Del. quantity
H and M pumps)		+ cm3/1000 strokes :
		+

60 1.4 +/- 0.6 : +/- 1.20 600 max.1.4 WITH POSITIONER 1050 3.030 213.0 **→** 1.0 + 4.0 5.0 9.0 ACTERISTICS 700 3.120 237.0 +- 3.0 + 6.0 8.0 12.0 450 1.740 +~ 0.060 +- 0.060 cm3/1000 strokes : 26.0

Tolerance

cm3/1000 strokes : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 Uact V : 4.550

Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.07.97 : ISO 4113

Combination No. : F 002 AOZ 028

Injection bump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV450...1100A0C905R

Governer no. : F 002 A20 219

Cust. part No. : 3931398

Customer-spec. information Customer : CDC : 6BT : 72.0 Motor Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

C13

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 8.95

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 68.0	+ Aneroid pressure + hPa : - + Del. quantity
Tolerance cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : 68.0 + Tolerance
Check tolerance cm3/1000s. : +- 3.0	+ cm3/1000 strokes : + 1.0 + Check tolerance + cm3/1000s. : + 3.0
Spreed	Spreed Tolerance cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	
	CONTROL LEVER
Rated speed rpm : 450	control lever position degree : 112.0 tolerance degree : + 4.0
Rack travel in mm : 5.50 Tolerance mm : +- 0.10	RATED SPEED
Del. quantity cm3/1000 strokes : 18.0	rack travel mm : 7.90
Tolerance	+ Rated speed rpm : 1175 + Tolerance 1/min : +- 5
$cm3/1000$ strokes : \leftarrow 2.0	+
Check tolerance cm3/1000s. : +- 4.5	+ rack travel mm : 5.20
Spreed	+ Rated speed rpm : 1225 + Tolerance 1/min : +- 5
Tolerance	+
cm3/1000 strokes : 3.5 Check tolerance	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55
cm3/1000s. : 5.5	+ Tolerance mm : +- 0.55 + Rated speed rpm : 1500
	+
(B) SETTING OF INJECTION PUMP	+ rack travel mm : 5.20
WITH GOVERNOR	+ Rated speed rpm : 1230 + Tolerance 1/min : +- 15
	1
GUIDE SLEEVE POSITION	
	LOW IDLE
control lever	†
position degree : - 3 Rated speed rpm : 800	+ control lever + position degree : 93.0
Nated opera ipiii . Ooo	tolerance degree : +- 4.0
Rack travel in mm : 0.50	+
Tolerance mm : +- 0.20	+ Control lever difference + Grad : 19.0
governor spring	tolerance degree : +- 6.0
pre-tension	+
click setting x : 4.00	+ Setting point w/out bumper spring
	Rated speed rpm : 450
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 5.00
Rated speed rpm : 1100	Tolerance mm : +- 0.10
	Rated speed rpm : 100

CRT mm min. : > 19.00

Testing:

Rated speed rpm : 450 rack travel mm : 5.50 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 8.95 Tolerance mm : +- 0.05

Rated speed rpm : 850

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 120.5

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm : 5.50
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 18.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.06.97 Test oil : ISO 4113

Combination No. : F 002 A0Z 068

Injection pump

Pump designation : PES6A95D320/3RS2881 EP type number : F 002 A10 019

Governor

Governer design. : RSV450...900A7c946R

Governer no. : F 002 A20 246

Cust. part No. : 3933101

Customer-spec. information Customer : CDC Motor : 6BTA
Power KW : 132.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

har

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.65
Tolerance mm : +- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.50 Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.35 Tolerance mm : +- 0.05

C16

+	Aneroid pressure
Del. quantity	hPa : −
cm3/1000 strokes : 134.5	Del. quantity
+	cm3/1000 strokes : 134.5
Tolerance	Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance
cm3/1000s. : +- 3.0	cm3/1000s. : +- 3.0 Spreed
T	Tolerance
Spreed	cm3/1000 strokes : 3.5
1	Check tolerance
Tolerance	cm3/1000s. : 6.0
cm3/1000 strokes : 3.5	
<u> </u>	
Check tolerance	
cm3/1000s. : 6.0	CONTROL LEVER
+	control lever
Dated analysis (50	position degree : 112.5
Rated speed rpm : 450	tolerance degree : +- 4.0
Rack travel in mm: 7.50	PATEN COFFN
Tolerance mm : + 0.10	RATED SPEED rack travel mm : 12.30
Del. quantity	Rated speed rpm : 955
cm3/1000 strokes : 22.0	Tolerance 1/min : +- 5
Tolerance	rocci direc i i i i i i
cm3/1000 strokes : + 2.0	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 995
cm3/1000s. : + 4.5	Tolerance 1/min : +- 5
Spreed	
Tolerance +	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : +- 0.55
Check tolerance	Rated speed rpm : 1075
cm3/1000s. : 5.5	
†	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1005
WITH GOVERNOR	Tolerance 1/min : +- 15
WITH GOVERNOR	
I	
GUIDE SLEEVE POSITION	LOW IDLE
+	
+	
control lever	control lever
position degree : -3	position degree : 87.0
Rated speed rpm : 800 +	tolerance degree : +- 4.0
Double terrory in my	e la la disce
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : + 0.20	Grad : 25.5
governor spring	tolerance degree : +- 6.0
pre-tension	Setting point w/out bumper spring
click setting x : 3.75	occoming point wrong bumper spring
	Rated speed rpm : 450
	rack travel mm : 7.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.10
+	
Rated speed rpm : 900	Rated speed rpm : 100

CRT mm min. : > 19.00 Testing: Rated speed rpm 450 rack travel mm : 7.50 Tolerance mm : +- 0.10 TORQUE CONTROL Rated speed rpm : 900 rack travel mm : 13.35 Tolerance mm : +- 0.05 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 : + 0.50Tolerance mm Del. quantity cm3/1000 strokes : 120.5 Tolerance cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : +- 15.0 LOW IDLE Rated speed rpm : 450 Rack travel in mm : 7.50 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : + 2.0Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance

End of test specification sheet

5.5

cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : ISO 4113

: 07.07.97

Combination No. : F 002 A0Z 069

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...110GA2c947R

Governer no. : F 002 A20 248

Cust. part No. : 3933623

Customer-spec. information Customer : CDC
Motor : 6BTA
Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05 Check tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 8.50 Tolerance : +- 0.50 Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.80 Tolerance mm : +- 0.05

C19

Del. quantity cm3/1000 strokes : 120.5	Aneroid pressure hPa : 1200
Tolerance cm3/1000 strokes : +- 1.0	Del. quantity cm3/1000 strokes : 120.5 Tolerance
Check tolerance cm3/1000S. : +- 3.0	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 3.0
Spreed	Spreed Tolerance cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000S. : 6.0
Check tolerance cm3/1000s. : 6.0	CONTROL LEVED
	CONTROL LEVER
Rated speed rpm : 500	control lever position degree : 97.0 tolerance degree : +- 4.0
Rack travel in mm: 5.50 Tolerance mm: + 0.10	RATED SPEED
Del. quantity cm3/1000 strokes : 21.5 Tolerance	rack travel mm : 12.80 Rated speed rpm : 1155 Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5	rack travel mm : 4.00
Spreed Tolerance	Rated speed rpm : 1240 Tolerance 1/min : +- 5
cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm5/1000s. : 5.5	Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 76.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Control lever difference Grad : 21.0
governor spring pre-tension	tolerance degree : +- 6.0
click setting x : 3.75	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 500 rack travel mm : 5.00 Tolerance mm : + 0.10
Rated speed rpm : 1100	Rated speed rpm : 100

	40.00
CRT mm min.	: > 19.00
Testing:	
Rated speed rpm	: 500_
rack travel mm Tolerance mm	: 5.50 : +- 0.10
rocci ai ice likir	. + 0.10
TORQUE CONTROL	
Rated speed rpm	
rack travel mm Tolerance mm	: 13.80 : +- 0.05
Rated speed rpm rack travel mm	: 800 : 14.60
Tolerance mm	: + 0.10
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
	500
Rated speed rpm Pressure hPa	: 500 : 1200
Rated speed rpm Pressure hPa	: 500
rack travel mm	: 11.30
Tolerance mm	: + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa	: 800
rack travel mm	: 13.00
Tolerance mm	: +- 0.20
Pressure hPa rack travel mm	: 600 : 11.80
Tolerance mm	: 11.80 : +- 0.20
P1 (P1) and males and a second	
FUEL DELIVERY CHA	KACTERISTICS
Aneroid pressure	The same of the sa
hPa	: 1200
Rated speed rpm Del. quantity	: 800
cm3/1000 strokes	: 134.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0

Aneroid pressure hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes	: 94.0
Tolerance cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 3.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 100 : 20.50 : +- 0.50
cm3/1000 strokes Tolerance	: 121.5
cm3/1000 strokes Check tolerance	: +- 10.0
cm3/1090s.	: +- 15.0
LOW IDLE	·
Rated speed rpm	: 500
Rack travel in mm Tolerance mm Del. quantity	: 5.50 : +- 0.10
cm3/1000 strokes Tolerance	: 21.5
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s. Spreed	: +- 4.5
Tolerance cm3/1000 strokes Check tolerance	: 3.5
cm3/1000s.	: 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.97 Test oil : ISO 4113

Combination No. : 0 401 870 070

Injection pump

Pump designation : PE12P110A520/5RS408

EP type number : 0 411 810 039

Governor

Governer design. : RSUV300...1150P0A324

: DR Governer no. : 0 421 831 008

Cust. part No. :

Customer-spec. information Customer : MWM

Motor

: D.DT.TBD232V12

TEST BENCH REQUIREMENTS

Inlet line : 3.1u3.2

Test oil inlet

: 40

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 1.5

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

: 1-12- 9- 4- 5- 8 Firing order

: - 11- 2- 3- 10 : - 7- 6

Phasing : 0-30-60-90-120-150

: -180-210-240-270

: -300-330

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 12.25

Tolerance mm : +- 0.05

Del. quantity	+ Tolerance
cm3/1000 strokes : 137.5	+ cm3/1000 strokes : +- 1.5
	+ Check tolerance
Tolerance	- cm3/1000s. : +- 4.0
cm3/1000 strokes : + 1.5	+ Spreed
CIID/ 1000 SCI ORES . 1 1.5	
Charle talonana	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 4.0
cm3/1000s. : +- 4.0	† Check tolerance
	+ cm3/1000s. : 7.5
Spreed	+
	+
Tolerance	
cm3/1000 strokes : 4.0	→ CONTROL LEVER
	_
Check tolerance	+ control lever
cm3/1000s. : 7.5	position degree : 61.0
	+ tolerance degree : +- 4.0
	RATED SPEED
Rated speed rpm : 300	
Nated Speed (pill . 300	+ rack travel mm : 11.20
Onch Annual in man 7 70	Rated speed rpm : 1195
Rack travel in mm: 7.30	+ Tolerance 1/min : +- 5
Tolerance mm : + 0.10	†
Del. quantity	+ rack travel mm : 4.00
cm3/1000 strokes : 26.0	+ Rated speed rpm : 1250
Tolerance	+ Tolerance 1/min : +- 15
cm3/1000 strokes : +- 3.0	+
Check tolerance	+ rack travel mm : 1.00
cm3/1000s. : +- 5.5	+ Tolerance mm : +- 0.70
Spreed	Rated speed rom : 1400
Tolerance	1
cm3/1000 strokes : 4.5	rack travel mm : 4.00
	· · · · · · · · · · · · · · · · · · ·
Check tolerance	+ Rated speed rpm : 1260
cm3/1000s. : 7.5	+ Tolerance 1/min : +- 15
	†
	+
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	
	+ LOW IDLE
	+
	<u>}</u> -
GUIDE SLEEVE POSITION	+ control lever
	position degree : 21.0
	tolerance degree : +- 4.0
control lever	T coverance degree : ** 4.0
	T catting paint of the first t
position degree : - 3	- Setting point w/out bumper spring
Rated speed rpm : 800	†
	+ Rated speed rpm : 300
Rack travel in mm : 0.65	+ rack travel mm : 6.80
Tolerance mm : ← 0.35	+ Tolerance mm : + 0.10
	+
	+ Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	1
THE COMP PRODUCTION AT FORE COMP OTO	Rated speed rpm : 300
Rated speed rpm : 1150	
Aneroid pressure	Tolerance mm : +- 0.10
hPa : ~	†
Del. quantity	+ rack travel mm : 2.00
cm3/1000 strokes : 137.5	+ Rated speed rpm : 450
	+ Tolerance 1/min : +- 30

TORQUE CONTROL

Rated speed rpm : 1150 rack travel mm : 12.25 Tolerance mm : + 0.05

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 7.30
Tolerance mm: + 0.10
Del. quantity
cm3/1000 strokes: 26.0
Tolerance
cm3/1000 strokes: + 3.0
Check tolerance
cm3/1000s. : + 5.5

Spreed
Tolerance

cm3/1000 strokes : 4.5
Check tolerance
cm3/1000s. : 7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 801A

Injection pump

Pump designation : PES6P120A1320/5RS337

: 2Y EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

Governer no. : 0 421 833 553

Cust. part No. : 1382923 - Version A

Customer-spec. information Customer : SCANIA

: DSI1172A,-C1157A Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure bar : 251.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

: - 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: + 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

	+
Rack travel in mm : 15.65 Tolerance mm : +- 0.05	Rated speed rpm : 700 Aneroid pressure
Del. quantity	hPa : 1500 Del. quantity
cm3/1000 strokes : 234.0	+ cm3/1000 strokes : 234.0 + Tolerance
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000S. : +- 7.0	+ cm3/1000s. : +- 7.0 + Spreed + Tolerance
Spreed	+ cm3/1000 strokes : 8.0 + Check tolerance
	cm3/1000s. : 12.0
Tolerance cm3/1000 strokes : 8.0	‡
Check tolerance cm3/1000s. : 12.0	CONTROL LEVER
	control lever position degree : 34.0
	tolerance degree : +- 4.0
Rack travel in mm : 6.00	t control lever
Tolerance mm : + 0.20 Del. quantity	<pre>position degree : 84.0 tolerance degree : +- 4.0</pre>
cm3/1000 strokes : 20.0	totalia acgree
Tolerance cm3/1000 strokes : +- 4.0	+ ASSEMBLY GOVERNOR SETTING
Check tolerance cm3/1000s. : +- 6.0	+ Rated speed rpm : 750
Spreed Tolerance	rack travel mm : 14.60
cm3/1000 strokes : 5.0	Rated speed rpm : 788
Check tolerance cm3/1000s. : 9.0	Tolerance 1/min : +- 4
cm3/1000s. : 9.0	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	rack travel mm : 0.85
WITH GOVERNOR	Tolerance mm : +- 0.55 Rated speed rpm : 850
	Rated speed rpm : 751
GUIDE SLEEVE POSITION	rack travel mm : 14.60
	Rated speed rpm : 789
control lever position degree : - 3	+ Tolerance 1/min : + 4
position degree : - 3 Rated speed rpm : 800	rack travel mm : 4.00
Rack thought in many 0 FO	rack travel mm : 0.85
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	+ Tolerance mm : +- 0.55 + Rated speed rpm : 850
governor spring	‡
pre-tension	Rated speed rpm : 752
click setting x : 2.50	+ rack travel mm : 14.60
CINI LOAD DELTUEDY AT FUEL LOAD CTOD	Rated speed rpm : 790
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance 1/min : +- 4

rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 14.60
Rated speed rpm	: 791
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 14.60
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 755
rack travel mm	: 14.60
Rated speed rpm	: 793
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 15.65 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500
rack travel mm	: 15.65
Tolerance mm	: +- 0.05

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.50 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 240 : 14.00 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 450 : 15.05 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 188.0 : +- 1.0 : +- 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.07.97 : ISO 4113

Combination No. : 0 402 076 8013

Injection pump

Pump designation : PES6P12OA1320/5RS337

: 2Y EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

Governer no. : 0 421 833 553

Cust. part No. : 1382923 - Version B

Customer-spec. information

Customer : SCANIA

Motor

: DSI1172A,-C1157A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar

: 251.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : + 0.05

Check

: **←** 0.10 tolerance mm

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2 : -4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

	L
Rack travel in mm : 15.55	Rated speed rpm : 700
Tolerance mm : +- 0.05	Aneroid pressure
	hPa : 1500
Del. quantity cm3/1000 strokes : 238.0	Del. quantity cm3/1000 strokes : 238.0
CIII37 1000 311 0KeS . 230.0	Tolerance
Tolerance	cm3/1000 strokes : + 1.0
cm3/1000 strokes : +- 1.0	Check tolerance
Charle to Language	cm3/1000s. : + 7.0
Check tolerance - cm3/1000s. : + 7.0	Spreed Tolerance
- 1.0	cm3/1000 strokes : 8.0
Spreed	Check tolerance
* I	- cm3/1000s. : 12.0
Tolerance - cm3/1000 strokes : 8.0 -	
chis/ todo strokes . 8.0	
Check tolerance	CONTROL LEVER
cm3/1000s. : 12.0 -	
	control lever
	position degree : 34.0 tolerance degree : +- 4.0
-	t
Rack travel in mm : 6.00	control lever
Tolerance mm : +- 0.20	position degree : 84.0
Del. quantity - cm3/1000 strokes : 20.0 -	tolerance degree : +- 4.0
Tolerance	
cm3/1000 strokes : +- 4.0	ASSEMBLY GOVERNOR SETTING
Check tolerance	Patrick and all the STO
cm3/1000s. : ← 6.0 - Spreed -	Rated speed rpm : 750 rack travel mm : 14.50
Tolerance	L 14.30
cm3/1000 strokes : 5.0	Rated speed rpm : 788
Check tolerance	Tolerance 1/min : +- 4
cm3/1000s. : 9.0	- rack travel mm : 4.00
-	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	Tolerance mm : +- 0.55
WITH GOVERNOR	- Rated speed rpm : 850
3	
	Rated speed rpm : 751
GUIDE SLEEVE POSITION	- rack travel mm : 14.50
†	Bahad annual see
control lever	Rated speed rpm : 789 Tolerance 1/min : +- 4
position degree : - 3	rack travel mm : 4.00
Rated speed rpm : 800	
	rack travel mm : 0.85
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Tolerance mm : + 0.55
TOTE AND THE STEEL OF THE STEEL	- Rated speed rpm : 850
governor spring	-
pre-tension +	Rated speed rpm : 752
click setting x : 2.50	rack travel mm : 14.50
	- - Rated speed rpm : 790
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : +- 4
•	

rack travel mm	: 4.00
rack travel mm Tolerance mm	: 0.85 : +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 14.50
Rated speed rpm	: 791 : +- 4
Tolerance 1/min rack travel mm	: +- 4 : 4.00
rack travel mm Tolerance mm	: 0.85 : +- 0.55
Rated speed rpm	
Rated speed rpm	
rack travel mm	: 14.50
Rated speed rpm Tolerance 1/min	: 792 : +- 4
rack travel mm	: 4.00
mank thankal mm	: 0.85
rack travel mm Tolerance mm	: 0.85 : +- 0.55
Rated speed rpm	: 850
Rated speed rpm rack travel mm	: 755 : 14.50
Rated speed rpm Tolerance 1/min	: 793 : +- 4
rack travel mm	4.00
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
TORQUE CONTROL	
Rated speed rpm rack travel mm	: 700 : 15.55
Tolerance mm	: +- 0.05
ANEROID/ALTITUDE	
COMPENSATOR TEST	
CETTALE	
SETTING	
Rated speed rpm	: 500
Pressure hPa rack travel mm	: 1500 : 15.55
Tolerance mm	: +- 0.05

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.50 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 240 : 14.00 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 450 : 15.05 : +- 0.05
FUEL DELIVERY CHA	
FUEL DELIVERY CHA	RACTERISTICS
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	RACTERISTICS 500
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	RACTERISTICS : - : 500 : 188.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	RACTERISTICS : - : 500 : 188.0
FUEL DELIVERY CHA Ameroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: - : 500 : 188.0 : + 1.0
FUEL DELIVERY CHA Ameroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: - 500 : 188.0 : + 1.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 03.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 8010

Injection pump

Pump designation : PES6P120A1320/5RS337

: 2Y

EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

Governer no. : 0 421 833 553

Cust. part No. : 1382923 - Version C

Customer-spec, information

Customer : SCANIA

Motor

: DSI1172A,-C1157A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C

40

Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5

003

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

: +- 0.3C Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance °NW : +- 0.75

Barrel no.

: 1

BASIC SETTING

Rack travel in mm : 15.85	Rated speed rpm : 700
Tolerance mm : +- 0.05	Aneroid pressure
+	hPa : 1500
Del. quantity cm3/1000 strokes : 240.0	Del. quantity
cms/1000 strokes : 240.0	cm3/1000 strokes : 240.0 Tolerance
Tolerance	cm3/1000 strokes : +- 1.0
cm3/1000 strokes : + 1.0	Check tolerance
Check tolerance	cm3/1000s. : + 7.0
cm3/1000s. : +- 7.0	Spreed Tolerance
	cm3/1000 strokes : 8.0
Spreed	Check tolerance
Tolerance	cm3/1000s. : 12.0
cm3/1000 strokes : 8.0	
Check tolerance	CONTROL LEVER
cm3/1000s. : 12.0	control lever
	position degree : 34.0
+	tolerance degree : +- 4.0
Rack travel in mm : 6.00	control lever
Tolerance mm : +- 0.20	position degree : 84.0
Del. quantity	tolerance degree : +- 4.0
cm3/1000 strokes : 20.0 +	
Tolerance	ACCEMBLY COVERNIOR OFFITAIR
cm3/1000 strokes : + 4.0 + Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000s. : + 6.0	Rated speed rpm : 750
Spreed	rack travel mm : 14.80
Tolerance + cm3/1000 strokes : 5.0 +	700
cm3/1000 strokes : 5.0 + Check tolerance	Rated speed rpm : 788 Tolerance 1/min : +- 4
cm3/1000s. : 9.0	rack travel mm : 4.00
+	
(B) SETTING OF INJECTION PUMP	rack travel mm : 0.85
WITH GOVERNOR	Tolerance mm : +- 0.55 Rated speed rpm : 850
+	
†	Data di anno di anno
GUIDE SLEEVE POSITION	Rated speed rpm : 751 rack travel mm : 14.80
T	1907 Clayet MAR . 14.00
 	Rated speed rpm : 789
control lever	Tolerance 1/min : + 4
position degree : -3 + Rated speed rpm : 800 +	rack travel mm : 4.00
Rated speed rpm : 800	rack travel mm : 0.85
Rack travel in mm : 0.50	Tolerance mm : + 0.55
Tolerance mm : +- 0.20	Rated speed rpm : 850
governor spring +	
pre-tension +	Rated speed rpm : 752
click setting x : 2.50	Rated speed rpm : 752 rack travel mm : 14.80
+	Detail aread was 300
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 790 Tolerance 1/min : +- 4
TOLE LOAD DELIVERY AT FOLL LOAD STOP	TOLE ONCE TAIRITY . TO 4

rack travel mm	: 4.00
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 850
Rated speed rpm rack travel mm	
Rated speed rpm Tolerance 1/min rack travel mm	: 791 : +- 4 : 4.00
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55 : 850
Rated speed rpm rack travel mm	
Rated speed rpm Tolerance 1/min rack travel mm	: 792 : +- 4 : 4.00
rack travel mm Tolerance mm Rated speed rpm	: +- 0.55
Rated speed rpm rack travel mm	
Rated speed rpm Tolerance 1/min rack travel mm	: 793 : +- 4 : 4.00
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 850
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 15.85 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 15.85 : + 0.05

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.50 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 240 : 14.00 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 450 : 15.05 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	RACTERISTICS : - : 500
FUEL DELIVERY CHA Aneroid pressure hPa kated speed rpm Del. quantity cm3/1000 strokes Tolerance	RACTERISTICS : - : 500 : 188.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 188.0 : + 1.0
FUEL DELIVERY CHA Aneroid pressure hPa kated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	RACTERISTICS : - : 500 : 188.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 188.0 : + 1.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 188.0 : + 1.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 08.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 076 802A

Injection pump

Pump designation : PES6P120A1320/5RS337

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

: 0 421 833 555 Governer no.

Cust. part No. : 1385930 - Version A

Customer-spec. information

Customer : SCANIA

Motor : DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C 40 : + 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 4.45 : +- 0.05 Prestroke mm Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.30

Check

tolerance NW : +- 0.75

Barrel no. : 1

BASIC SETTING

	1
Rack travel in mm : 14.55	İ
Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes 209.0	Rated speed rpm : 700 Aneroid pressure
Tolerance	+ hPa : 1500 + Del. quantity
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : 209.0 Tolerance
Check tolerance cm3/1000s. : +- 6.0	- cm3/1000 strokes : +- 1.0 - Check tolerance
Spreed	- cm3/1000s. : +- 6.0 - Spreed
	Tolerance
Tolerance	+ cm3/1000 strokes : 8.0
cm3/1000 strokes : 8.0	+ Check tolerance
Charle to Language	+ cm3/1000s. : 12.0
Check tolerance cm3/1000s. : 12.0	‡
	CONTROL LEVER
	†
Rated speed rpm : 350	+ control lever
Port, thought in my a F 40	+ position degree : 54.0
Rack travel in mm : 5.10 Tolerance mm : +- 0.10	tolerance degree : +- 4.0
Tolerance mm : +- 0.10 Del. quantity	T control loven
cm3/1000 strokes : 18.0	+ control lever + position degree : 104.0
Tolerance	
cm3/1000 strokes : +- 3.0	tolerance degree : +- 4.0
Check tolerance	RATED SPEED
cm3/1000s. : +- 6.0	rack travel mm : 13.50
Spreed	+ Rated speed rpm : 1095
Tolerance	+ Tolerance 1/min : +- 5
cm3/1000 strokes : 4.0	+ Check
Check tolerance	+ speed 1/min : +- 10
cm3/1000s. : 8.0	+
	+ rack travel mm : 4.00
	+ Rated speed rpm : 1190
(B) SETTING OF INJECTION PUMP	+ Tolerance 1/min : +- 15
WITH GOVERNOR	+ Check
	+ speed 1/min : +- 20
	rack travel mm : 0.85
GUIDE SLEEVE POSITION	+ Tolerance mm : +- 0.55
	Rated speed rpm : 1350
control loves	†
control lever	+ rack travel mm : 4.00
position degree : - 3	Rated speed rpm : 1210
Rated speed rpm : 800	+ Tolerance 1/min : +- 15 + Check
Rack travel in mm : 0.50	+ speed 1/min : +- 20
Tolerance mm : +- 0.20	3peed 1/111111 . +- 20
	†
governor spring pre-tension	T
click setting x : 5.50	LOW IDLE
CLICK Security x : 3.30	TOW TOPE

control lever position degree tolerance degree	: 73.0 : +- 4.0
control lever position degree tolerance degree	: 23.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : + 9.10
Testing:	
Rated speed rpm rack travel mm Tolerance nm	: 350 : 5.10 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 14.55 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 14.55 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.00 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 410 : 12.60 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 670 : 13.95 : +- 0.05

Aneroid pressure hPa Rated speed rpm	:		1500 1050	
Del. quantity cm3/1000 strokes	:		197.0	
Tolerance cm3/1000 strokes Check tolerance	:	+	4.0	
cm3/1000s.	:	+-	6.0	
Aneroid pressure	:			
Rated speed rpm Del. quantity	:		500	
cm3/1000 strokes Tolerance	:		150.0	
cm3/1000 strokes Check tolerance	:	+-	1.0	
cm3/1000s.	:	+	4.0	
LOW IDLE				
	:		350	
Rated speed rpm Rack travel in mm Tolerance mm		+-	350 5.10 0.10	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	:	+	5.10	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokas	:	+-	5.10 0.10	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokas Check tolerance cm3/1000S. Spreed	:	+-+-	5.10 0.10 18.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes	:	+-	5.10 0.10 18.0 3.0	
LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	•	+-+-	5.10 0.10 18.0 3.0 6.0	

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 811A

Injection pump

Pump designation : PES6P120A1320/5RS338

EP type number

Governor

Governer design. : RSV350...1100P8A664

Governer no.

Cust. part No. : 1393864 - Version A

Customer-spec. information : SCANIA Customer

Motor : DS9 93M, DSC9 47A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 : +- 1.5 bar Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : ÷ 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : → 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : + - 0.75

Barrel no. : 1

BASIC SETTING

	+
Rack travel in mm : 13.85 Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 196.0	Rated speed rpm : 700 Aneroid pressure hPa : 1500
Tolerance cm3/1000 strokes : + 1.0	+ Del. quantity + cm3/1000 strokes : 196.0 + Tolerance + cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : +- 6.0	+ cm3/1000 strokes : + 1.0 Check tolerance - cm3/1000S. : + 6.0 Spreed
Spreed	Tolerance : 8.0
Tolerance cm3/1000 strokes : 8.0	Check tolerance : 12.0
Check tolerance cm3/1000s. : 12.0	
Approximate the state of the st	+ CONTROL LEVER
Rated speed rpm : 350	+ control lever + position degree : 56.0 + tolerance degree : +- 4.0
Rack travel in mm : 5.20 Tolerance mm : +- 0.10 Del. quantity	control lever position degree : 106.0
cm3/1000 strokes : 20.0 Tolerance	tolerance degree : +- 4.0
<pre>cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0</pre>	+ RATED SPEED + rack travel mm : 12.80 + Rated speed rpm : 1145
Spreed Tolerance	Tolerance 1/min : + 5 + Check
cm3/1000 strokes : 4.0 Check tolerance	speed 1/min : + 10
cm3/1000s. : 8.0	rack travel mm : 4.00 Rated speed rpm : 1230 Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Check speed 1/min : +- 20
	rack travel mm : 0.85 Tolerance mm : +- 0.55
GUIDE SLEEVE POSITION	Rated speed rpm : 1400
control lever position degree : - 3	rack travel mm : 4.00 Rated speed rpm : 1250 Tolerance 1/min : +- 15
Rated speed rpm : 800 Rack travel in mm : 0.50	Check speed 1/min : +- 20
Tolerance mm : + 0.20	‡
governor spring pre-tension click setting x : 6.00	LOW IDLE
	1

control lever position degree tolerance degree	: 74.0 : + 4.0
control lever position degree tolerance degree	: 24.0 : +- 4.0
Setting point w/c	out bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.70 : +- 0.10
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.20 : +- 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.85 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.85 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.85 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.70 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 300 : 11.60 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 540 : 13.05 : + 0.05

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1500 : 1100 : 186.0 : +- 4.0 : +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 114.0 : +- 1.0 : +- 4.0
LOW IDLE	: 350
Rack travel in mm Tolerance mm	: 5.20 : + 0.10
Del. quantity cm3/1000 strokes	: 20.0
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 4.0
Check tolerance cm3/1000s.	: 8.0

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02,07,97 : ISO 4113

Combination No. : 0 402 076 811B

Injection pump

Pump designation : PES6P120A1320/5RS338

: 0

EP type number : 0 412 026 800

Governor

Governer design. : RSV350...1100P8A664

Governer no. : 0 421 833 584

Cust. part No. : 1393864 - Version B

Customer-spec. information

Customer : SCANIA

Motor

: DS9 93M,DSC9 47A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

x inside diameter : 2.0 x length mm : 600

Outside diameter : 6.0

Test lines : 1 680 750 008

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

+	Aneroid pressure
Rack travel in mm: 12.35 Tolerance mm: +- 0.05	hPa : 1500 Tolerance
Tolerance	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : +- 1.0	cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : +- 4.0	Tolerance cm3/1000 strokes : 8.0
Spreed	Check tolerance cm3/1000s. : 12.0
Tolerance cm3/1000 strokes : 8.0	CONTROL LEVER
Check tolerance cm3/1000s. : 12.0	control lever
	position degree : 59.0 tolerance degree : + 4.0
Rated speed rpm : 350	control lever position degree : 109.0
Rack travel in mm: 5.20 Tolerance mm: + 0.10	tolerance degree : +- 4.0
Del. quantity cm3/1000 strokes : 20.0	RATED SPEED rack travel mm : 11.30
Tolerance cm3/1000 strokes : +- 3.0	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : + 6.0 Foreed	Check speed 1/min : /- 10
Tolerance cm3/1000 strokes : 4.0	rack travel mm : 4.00 Rated speed rpm : 1245
Check tolerance cm3/1000s. 8.0	Tolerance 1/min : + 15 Check
‡	speed 1/min : +- 20
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1350
	·
GUIDE SLEEVE POSITION	
control lever	LOW IDLE
position degree : - 3 Rated speed rpm : 800	control lever position degree : 77.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	tolerance degree : +- 4.0
governor spring pre-tension click setting x : 6.00	control lever position degree : 27.0 tolerance degree : +- 4.0
Total Secting X	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 350 rack travel mm : 4.70
Rated speed rpm : 700	Tolerance mm : +- 0.10

7	e	S	t	ir	ng

Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 12.35 Tolerance mm : + 0.05

Rated speed rpm : 1100 rack travel mm : 12.35 Tolerance mm : +- 0.10

ANERGID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.35 Tolerance mm : +- 0.05

Rated speed rpm : 500 Pressure hPa : - rack travel mm : 10.70 Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 230 rack travel mm : 11.15 : +- 0.15 Tolerance mm

Pressure hPa : 310 rack travel mm : 11.65 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 1500 hPa Rated speed rpm : 1100 Tolerance

cm3/1000 strokes : +- 4.0 Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 114.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s : +- 4.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm : 5.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +-6.0 Spreed

Tolerance cm3/1000 strokes : 4.0 Check tolerance

cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.07.97 : ISO 4113

Combination No. : 0 402 076 8124

Injection pump

Pump designation: PES6P120A1320/5RS338

EP type number : 0 412 026 801

Governor

Governer design. : RSV350...1100P1A666

Governer no. : 0 421 833 585

Cust. part No. : 1393867 - Version A

Customer-spec. information

Customer : SCANIA

Motor : DS9 92A/95M

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. *C

Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar :

Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar

Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter:

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance 'NW : +- 0.75

Barrel no. : 1

BASIC SETTING

	L
Rack travel in mm : 16.35 Tolerance mm : +- 0.05	Rated speed rpm : 700 Aneroid pressure
Del. quantity cm3/1000 strokes : 217.0	+ hPa : 1500 + Del. quantity + cm3/1000 strokes : 217.0
	+ Tolerance
Tolerance cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : +- 1.0 + Check tolerance + cm3/1000s. : +- 7.0
Check tolerance cm3/1000s. : + 7.0	Spreed Tolerance
Spreed	- cm3/1000 strokes : 8.0 - Check tolerance - cm3/1000s. : 12.0
Tolerance cm3/1000 strokes : 8.0	- cm3/1000s. : 12.0
Check tolerance cm3/1000S. : 12.0	CONTROL LEVER
	<pre>control lever position degree : 34.0 tolerance degree : +- 4.0</pre>
Rack travel in mm : 6.00	+ control lever
Tolerance mm : +- 0.10 Del. quantity	position degree : 84.0 tolerance degree : +- 4.0
cm3/1000 strokes : 20.0 Tolerance	1
cm3/1000 strokes : +- 4.0	ASSEMBLY GOVERNOR SETTING
Check tolerance cm3/1000s. : +- 6.0 Spreed	Rated speed rpm : 750 rack travel mm : 15.30
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 788
Check tolerance cm3/1000s. : 9.0	+ Tolerance 1/min : +- 4 + rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 850
GUIDE SLEEVE POSITION	Rated speed rpm : 751 rack travel mm : 15.30
	+ Rated speed rpm : 789
control lever	+ Tolerance 1/min : +- 4
position degree : - 3 Rated speed rpm : 800	+ rack travel mm : 4.00
Rack travel in mm: 0.50 Tolerance mm: +- 0.20	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55 + Rated speed rpm : 850
governor spring pre-tension click setting x : 2.25	Rated speed rpm : 752 rack travel mm : 15.30
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 790 + Tolerance 1/min : +- 4

rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 15.30
Rated speed rpm	: 791
Tolerance 1/min	: + 4
rack travel nm	: 4.30
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 15.30
Rated speed rpm	: 792
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 755
rack travel mm	: 15.30
Rated speed rpm	: 793
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
TORQUE CONTROL Rated speed rpm	: 700_

TORQUE CONTROL	
Rated speed rpm	: 700
rack travel mm	: 16.35
Tolerance mm	: +- 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 16.35
Tolerance mm : +- 0.05

Rated speed rpm	;	500
Pressure hPa	:	-
rack travel mm	:	12.00
Tolerance mm	: +	- 0.20

MEASUREMENT

Rated speed rpm	:	500
Pressure hPa rack travel mm Tolerance mm	: +	340 13.10 - 0.20
Pressure hPa rack travel mm Tolerance mm	: : : +	740 15.25 - 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	•	157.0
Tolerance		
cm3/1000 strokes	: +-	- 1.0
Check tolerance		
cm3/1000s.	: +-	- 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.07.97 Test oil : ISO 4113

Combination No. : 0 402 678 8328

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0 412 628 893

Governor

Governer design. : RSV350...1050P8A652

Governer no. : 0 421 833 569

Cust. part No. : 1391878 - Version B

Customer-spec. information

Customer : SCANIA

Motor

: DS(C,I)14...A

TEST BENCH REQUIREMENTS

Inlet line

: 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

: 251.5

Tolerance bar : +- 1.5

D18

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

: 4.45 Prestroke mm

Tolerance mm : +~ 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

> : -225-270-315 : +- 0.30

Tolerance Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.95

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 256.0

Tolerance cm3/1000 strokes : +- 1.0	+ Tolerance
cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : +- 1.0 + Check tolerance
Check tolerance	112 111 11 11 11 11 11 11 11 11 11 11 11
cm3/1000s. : +- 7.0	+ cm3/1000s. : +- 7.0 + Spreed
CIID/ 10003 + /.0	Tolerance
Spreed	- cm3/1000 strokes : 8.0
opi cca	Check tolerance
Tolerance	+ cm3/1000s. : 12.0
cm3/1000 strokes : 8.0	12.0
	1
Check tolerance	
cm3/1000s. : 12.0	+ CONTROL LEVER
	+
	+ control lever
	† position degree : 57.0
Rated speed rpm : 350	tolerance degree : +- 4.0
	
Rack travel in mm: 4.60	control lever
Tolerance mm : + 0.10	position degree : 107.8
Del. quantity	tolerance degree : + 4.0
cm3/1000 strokes : 21.0 Tolerance	DATES COPES
cm3/1000 strokes : +- 3.0	+ RATED SPEED + rack travel mm : 12.90
Check tolerance	+ Rated speed rpm : 12.90
cm3/1000s. : +- 6.0	Tolerance 1/min : +- 5
Spreed	+ Check
Tolerance	+ speed 1/min : +- 10
cm3/1000 strokes : 4.0	J Speed Triain
Check tolerance	rack travel mm : 4.00
cm3/1000s. : 8.0	Rated speed rpm : 1205
	+ Tolerance 1/min : +- 15
	Check
(B) SETTING OF INJECTION PUMP	+ speed 1/min : +- 20
WITH GOVERNOR	+
	+ rack travel mm : 0.85
	† Tolerance mm : +- 0.55
	+ Rated speed rpm : 1305
GUIDE SLEEVE POSITION	†
	†
control lever	
position degree : - 3	LOW IDLE
Rated speed rpm : 800	I LOW INCE
Nates speed i piii . Ooo	I
Rack travel in mm : 0.50	- control lever
Tolerance mm : + 0.20	position degree : 76.0
	+ tolerance degree : +- 4.0
governor spring	+
pre-tension	control lever
click setting x : 6.00	position degree : 26.0
	tolerance degree : + 4.0
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
	† <u> </u>
Rated speed rpm : 700	Rated speed rpm : 350
Aneroid pressure	+ rack travel mm : 4.10
hPa : 1500	Tolerance mm : +- 0.10
Del. quantity	† Tunking.
cm3/1000 strokes : 256.0	† Testing:

Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.95 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 13.95 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.95 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.80 : +- 0.20
MEASUREMENT	
MEMOUREMENT	
Rated speed rpm	: 500

hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: - : 500 : 173.0 : +- 1.0 : +- 4.0
LOW IDLE	
Rated speed rpm	: 350
Rack travel in mm Tolerance mm	: 4.60 : + 0.10
Del. quantity cm3/1000 strokes	: 21.0
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s. Spreed	: + 6.0
	: 4.0
Check tolerance cm3/1000S.	: 8.0

Aneroid pressure

End of test specification sheet

FUEL DELIVERY CHARACTERISTICS

Pressure hPa : 630 rack travel mm : 12.65 Tolerance mm : + 0.05

Aneroid pressure			
hPa	:	1	500
Rated speed rpm	:	1	050
Del. quantity			
cm3/1000 strokes	:		234.0
Tolerance			
cm3/1000 strokes	:	+	4.0
Check tolerance			
cm3/1000s.	;	+-	7.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 03.07.97 Test oil : ISO 4113

Combination No. : 0 402 678 8320

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0 412 628 893

Governor

Governer design. : RSV350...1050P8A652

Governer no. : 0 421 833 569

Cust. part No. : 1391878 - Version C

Customer-spec. information Customer : SCANIA

Motor : DS(C,I)14...A

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 13.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4 :-5-6-8

, , ,

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.45

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 271.0

Telepane	I Talanana
Tolerance cm3/1000 strokes : + 1.0	+ Tolerance + cm3/1000 strokes : +- 1.0
CIIIS TOOG SCHOKES	Check tolerance
Check tolerance	+ cm3/1000s. : +- 8.0
cm3/1000s. : + 8.0	+ Spreed
	Tolerance
Spreed	+ cm3/1000 strokes : 8.0
	† Check tolerance
Tolerance	+ cm3/100Cs. : 12.0
cm3/1000 strokes : 8.0	†
Check tolerance	İ
cm3/1000s. : 12.0	CONTROL LEVER
	+
	+ control lever
	+ position degree : 57.0
Rated speed rpm : 350	tolerance degree : +- 4.0
B -1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	†
Rack travel in mm: 4.60	t control lever
Tolerance mm : + 0.10	position degree : 107.0
Del. quantity	tolerance degree : + 4.0
cm3/1000 strokes : 21.0 Tolerance	T DATED SPEED
cm3/1000 strokes : + 3.0	+ RATED SPEED + rack travel mm : 13.40
Check tolerance	Rated speed rpm : 13.40
cm3/1000s. : +- 6.0	Tolerance 1/min : + 5
Spreed	+ Check
Tolerance	+ speed 1/min : +- 10
cm3/1000 strokes : 4.0	The special results and the special results are special results.
Check tolerance	rack travel mm : 4.00
cm3/1000s. : 8.0	+ Rated speed rpm : 1210
	+ Tolerance 1/min : + 15
	+ Check
(B) SETTING OF INJECTION PUMP	+ speed 1/min : +- 20
WITH GOVERNOR	†
	+ rack travel mm : 0.85
	+ Tolerance mm : + 0.55
GUIDE SLEEVE POSITION	Rated speed rpm : 1360
	1
	+
control lever	
position degree : - 3	+ LOW IDLE
Rated speed rpm : 800	†
Rack travel in mm : 0.50	† control loven
Tolerance mm : + 0.20	+ control lever + position degree : 76.0
TOTAL MAIL	tolerance degree : + 4.0
governor spring	Local difference degree : The 4.0
pre-tension	I control lever
click setting x : 6.00	position degree : 26.0
	tolerance degree : +- 4.0
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
	+
Rated speed rpm : 700	+ Rated speed rpm : 350
Aneroid pressure	+ rack travel mm : 4.10
hPa : 1500	Tolerance mm : +- 0.10
Del. quantity cm3/1000 strokes : 271.0	Tooting
cm3/1000 strokes : 271.0	+ Testing:

Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 14.45 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 14.45 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.80 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 420 : 11.40 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 630 : 12.65 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 1050
Del. quantity	: 249.0
cm3/1000 strokes Tolerance	: 249.0

Aneroid pressure hPa	•		
Rated speed rpm Del. quantity	:		500
cm3/1000 strokes Tolerance	:		173.0
cm3/1000 strokes Check tolerance	:	+-	1.0
cm3/1000s.	:	+-	5.0

LOW TOLE		
Rated speed rpm	:	350
Rack travel in mm Tolerance mm Del. quantity	: : +-	4.60 0.10
cm3/1000 strokes	:	21.0
Tolerance cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes Check tolerance	:	4.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 09.07.97 Test oil : ISO 4113

Combination No. : 0 402 678 835

Injection pump

Pump designation : PE8P12OA32OLS7844 EP type number : 0 412 628 860

Governor

Governer design. : RSV350...1050P0A673

Governer no. : 0 421 833 590

Cust. part No. : 0270746802

Customer—spec. information
Customer : MB-NFZ
Motor : 0M442LA
Power KW : 370.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05
Tolerance mm : +- 0.05
Check

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 8-7-2-6-3 :-5-4-1

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mm : 15.30 Tolerance mm : +- 0.05

+	Aneroid pressure
Del. quantity cm3/1000 strokes : 272.0	hPa : 1200 Del. quantity
Tolerance	cm3/1000 strokes : 272.0 Tolerance
cm3/1000 strokes : + 1.0	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : +- 4.0	cm3/1000S. : + 4.0 Spreed Tolerance
Spreed	cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes : 5.0	cm3/1000s. : 9.0
Check tolerance cm3/1000s. : 9.0	CONTROL LEVER
	control lever
Rated speed rpm : 350	position degree : 96.0 tolerance degree : + 4.0
Rack travel in mm: 5.00 Tolerance mm: + 0.10 Del. quantity	RATED SPEED rack travel mm : 14.30 Rated speed rpm : 1075
cm3/1000 strokes : 19.0 Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : i- 3.0 + Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1150
cm3/1000s. : +- 6.0 + Spreed +	Tolerance 1/min : +- 5
Tolerance + cm3/1000 strokes : 8.0 + Check tolerance + cm3/1000 strokes : 6.0 + cm3/1000 strokes	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm3/1000s. : 12.0	Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	LOW IDLE
	control lever
GUIDE SLEEVE POSITION	position degree : 75.0 tolerance degree : +- 4.0
control lever position degree : - 3	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 100
Rack travel in mm: 0.50 Tolerance mm: + 0.20	CRT mm min. : > 19.50
governor spring	Testing:
pre-tension click setting x : 3.75	Rated speed rpm : 350 rack travel mm : 5.00
	Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 395
Rated speed rpm : 1050	Tolerance 1/min : +- 30

SET IDLE AUXILIARY SPRING

rack travel mm : 2.00

TORQUE CONTROL

Rated speed rpm : 1030 rack travel mm : 15.30 Tolerance mm : + 0.05

Rated speed rpm : 800 rack travel mm : 15.30 : +- 0.10 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa

MEASUREMENT

400 Pressure hPa 1.70 rack travel mm Tolerance mm : +- 0.05

: 1000 Pressure hPa rack travel mm 6.65 Tolerance mm : +- 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 1200 hPa Rated speed rpm 800 Del. quantity

cm3/1000 strokes : 274.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

: 12.0 cm3/1000s.

Aneroid pressure

hPa Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 8.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 270.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm : 5.00 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 03.07.97 : ISO 4113

Test oil

Combination No. : 0 402 744 801

Injection pump

Pump designation : PES4P120A320RS7380

EP type number : 0 412 724 802

Governor

Governer design. : RQV275...1200PA1232K

Governer no. : 0 421 815 469

Cust. part No. : CCEP 5149B 66-237

Customer-spec. information

Customer : RENAULT V.I.

Motor

: MIDR 04-02-26 B4

Power KW

: 110.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. "C

Tolerance °C

: + 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 105 Tolerance l/h : +- 10.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter:

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.00 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 11.00

Tolerance mm : +- 0.50

Firing order : 1- 3- 4- 2

: 0-90-180-270 Phasing

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

*NW before FB : 0.30

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

travel

Difference ° CS : 1.50

CRT ZERO POSITION		+ gu
Rack travel in mm Tolerance mm	: 12.80 : +- 0.05	+ Rat + gu + tra
BASIC SETTING		+ Tol
Rated speed rpm	: 1200	+ Rat
Del. quantity cm3/1000 strokes	: 239.0	+ tra
Tolerance cm3/1000 strokes	: + 1.0	+ Rat + gui
Check tolerance cm3/1000s.	: + 4.0	† Tol
Spreed		+ GU1
Tolerance cm3/1000 strokes	: 5.0	cor
Check tolerance cm3/1000s.	: 9.0	+ Rat + Rad + Tol
	Miles (properties (professoran his des tils die les ses trapadem systems	
Rated speed rpm	: 325	FUL
Rack travel in mm Tolerance mm Del. quantity	: -6.80 : +- 0.10	Rat + Ane + hPa
cm3/1000 strokes Tolerance	: 40.0	Del
cm3/1000 strokes Check tolerance	: +- 2.0	Tol
cm3/1000S. Spreed	: +- 6.0	+ Che
•	: 8.0	+ Spr + Tol
Check tolerance cm3/1000s.	: 12.0	+ cm3 + Che + cm3
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	+
WITH GOVERNOR		CON
GUIDE SLEEVE TRAVE	EL .	cor
Rated speed rpm	: 1272	+ pos
guide sleeve travel mm Tolerance mm	: 9.31 : + 0.15	RAT
		Rat

‡	Rated speed rpm guide sleeve	: 325
+	travel mm Tolerance mm	: 1.52 : +- 0.20
╒╬╸╋╺╬╌╬╌╬╸╬╸╬╸╬╸╬╸╬╸╬╸╬╸╇╸╇╸╇╸╇╸╇╸╇╸╇	Rated speed rpm guide sleeve	: 894
‡	travel mm Tolerance mm	: 6.60 : +- 0.25
†	Rated speed rpm guide sleeve travel mm	: 560 : 4.01
Ţ	Tolerance mm	: +- 0.25
‡	Rated speed rpm guide sleeve travel mm	: 1650 : 13.50
Ţ	Tolerance mm	: +- 0.50
‡	GUIDE SLEEVE POSIT	LTON
+	authorit davisa	
+	control lever position degree Rated speed rpm	: - 1 : 1482
Ī	Rack travel in mm Tolerance mm	
+	local direction	: +- 1.30
+++++		Y AT FULL LOAD STOP
-+-+-+-+-+	FULL LOAD DELIVERY	
- - - - - - - - - - - - - - - - - - - 	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa	Y AT FULL LOAD STOP
╌╀╌╀╌╀╌╀╌╂╌╂╌╂╌╂	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	Y AT FULL LOAD STOP : 1200
╌┾╌┽╌┼╌┼╌┼╌┼╌┼╌┼	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	Y AT FULL LOAD STOP : 1200 : 1200
╌┾┾┼┼┼┾╁┼┼┼┼┼┼┼┼	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	Y AT FULL LOAD STOP : 1200 : 1200 : 239.0
╌┾╌┽╌┽╌╇╌╇╌╇╌╇╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 1200 : 239.0 : + 1.0
╌╄╌╇╌╇╌╃╌╇╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	Y AT FULL LOAD STOP : 1200 : 1200 : 239.0 : +- 1.0 : +- 4.0
╌┾╌┽╌╃╌╇╌╂╌╂╌╂╌╂╌╂╌╃╌╃╌╃╌╃╌╃╌╃╌╃╌╃╌	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	Y AT FULL LOAD STOP : 1200 : 1200 : 239.0 : +- 1.0 : +- 4.0 : 5.0
╌┾╌┽╌╃╌╇╌╇╌╉╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	Y AT FULL LOAD STOP : 1200 : 1200 : 239.0 : +- 1.0 : +- 4.0 : 5.0
╌┾╌┽╌╃╌╇╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌┼╌┼╌┼	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes	Y AT FULL LOAD STOP : 1200 : 1200 : 239.0 : +- 1.0 : +- 4.0 : 5.0
╌┾╌┽╌╃╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╀╌╀╌╀╌╀	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	AT FULL LOAD STOP : 1200 : 1200 : 239.0 : +- 1.0 : +- 4.0 : 5.0 : 9.0
╌┞┾╌╀╌╀╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌╂╌	FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	AT FULL LOAD STOP : 1200 : 1200 : 239.0 : +- 1.0 : +- 4.0 : 5.0 : 9.0

Tolerance 1/min	: 15
rack travel mm Rated speed rpm Tolerance 1/min	: 1410
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
LOW IDLE	
control lever position degree tolerance degree	: 253.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 200
CRT mm min.	: < -4.70
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : -6.80 : +- 0.10
Rated speed rpm	: 390
TORQUE CONTROL Rated speed rpm	: 1200
Rated speed rpm rack travel mm Tolerance mm	: 700 : -1.15 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 350 : −2.90 : ← 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1200 : 1200
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : -4.10 : + 0.20

MEASUREMENT	
Rated speed rpm	: 1200
Pressure hPa rack travel mm Tolerance mm	: 200 : -3.40 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 320 : -2.75 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 155 : < 275
Check speed 1/min Check	: > 135
speed 1/min	: < 285
Del. quantity cm3/1000 strokes Tolerance	: 240.0
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 3.0 : +- 6.0
Check tolerance	
Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: +- 6.0 : : 500 : 161.0 : +- 1.0 : +- 4.0
Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. STARTING FUEL DEL Rated speed rpm	: +- 6.0 : : 500 : 161.0 : +- 1.0 : +- 4.0
Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. STARTING FUEL DEL	: +- 6.0 : 500 : 161.0 : +- 1.0 : +- 4.0 IVERY : 100

cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm	:	325	
Rack travel in mm Tolerance mm Del. quantity	: : +-	-6.80 0.10	
744000	:	40.0	
cm3/1000 strokes	; +-	2.0	
Check tolerance cm3/1000S. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 07.07.97 Test oil : ISO 4113

Combination No. : 0 402 744 808

Injection pump

Pump designation : PES4P120A320RS7402 EP type number : 0 412 724 804

Governor

Governer design. : RQV275...1200PA1257

: -1K

Governer no.

: 0 421 815 553

Cust. part No. : CCEP5166 66-238

Customer-spec. information

Customer : RENAULT V.I.

: MIDR 04-02-26 A4 Motor

Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 125 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.13 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 13.00

Tolerance mm : +- 0.50

Firing order : 1-3-4-2

: U-90-180-270 Phasing

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : -10.30

Tolerance : + 0.50

Check

tolerance "NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

travel : 13.00 Difference ° CS : 2.40

		+ Rated speed rpm : 325
		- 🕂 guide sleeve
CRT ZERO POSITION		travel mm : 1.52
		+ Tolerance mm : +- 0.20
Rack travel in mm	: 13.40	Rated speed rpm : 938
Tolerance mm	: 0.05	+ guide sleeve
		travel mm : 6.86
DAGTA OFFETALO		- + Tolerance mm : +- 0.25
BASIC SETTING		Rated speed rpm : 550
Rated speed rpm	• 1200	Rated speed rpm : 550 guide sleeve
macca opeca ipii	. 1200	+ travel mm : 3.92
Del. quantity		Tolerance mm : +- 0.25
cm3/1000 strokes	: 261.0	+
		+ Rated speed rpm : 1650
Tolerance		guide sleeve
cm3/1000 strokes	: 1.0	+ travel mm : 13.50
Charle talanamas		_ + Tolerance mm : +- 0.50
Check tolerance cm3/1000s.	: +- 4.0	<u> </u>
CIII37 10003.	; - 4. U	GUIDE SLEEVE POSITION
Spreed		T GOIDE SCEENE LOSTITON
Talananaa		+
Tolerance	. 5.0	+ control lever
cm3/1000 strokes	: 5.0	position degree : - 1
Check tolerance		_ † Rated speed rpm : 1450
cm3/1000s.	: 9.0	T Rack travel in mm: 12.40
10000	. ,	+ Tolerance mm : +- 1.30
Rated speed rpm	: 325	+ FULL LOAD DELIVERY AT FULL LOAD STOP
		+
Rack travel in mm		+ Rated speed rpm : 1200
Tolerance mm	: +- 0.10	+ Aneroid pressure
Del. quantity	. 77.0	† hPa : 1200
cm3/1000 strokes	: 33.0	+ Del. quantity
Tolerance cm3/1000 strokes	· +- 2 n	+ cm3/1000 strokes : 261.0 + Tolerance
Check tolerance	2.0	+ cm3/1000 strokes : +- 1.0
cm3/1000s.	: +- 6.0	+ Check tolerance
Spreed		+ cm3/1000s. : + 4.0
Tolerance		Spreed
cm3/1000 strokes	: 8.0	+ Tolerance
Check tolerance		+ cm3/1000 strokes : 5.0
cm3/1000s.	: 12.0	+ Check tolerance
		+ cm3/1000s. : 9.0
(B) SETTING OF IN	IECTION DUMP	
WITH GOVERNOR	02011014 1-0111	
THE TIT WE VEHICLE		CONTROL LEVER
		-
GUIDE SLEEVE TRAV	EL	→ control lever
		position degree : 298.0
Rated speed rpm	: 1260	tolerance degree : +- 4.0
guide sleeve	40 70	†
travel mm	: 10.32	+ RATED SPEED
Tolerance mm	: +- 0.15	rack travel mm : -1.00
		+ Rated speed rpm : 1245

Tolerance 1/min	: +- 5	+
rack travel mm Rated speed rpm Tolerance 1/min	: -9.40 : 1405 : +- 15	+++++++++++++++++++++++++++++++++++++++
rack travel mm Tolerance mm Rated speed rpm	: −12.90 : +− 0.50 : 1500	++++
LOW IDLE		+
control lever position degree tolerance degree	: 252.0 : +- 4.0	++++
Setting point w/o	out bumper spring	1
Rated speed rpm	: 225	Ŧ
CRT mm min.	: < -7.40	Ŧ
Testing:		+
Rated speed rpm rack travel mm Tolerance mm	: 325 : −8.90 : +- 0.10	++++
Rated speed rpm	: 390	+++++++++++++++++++++++++++++++++++++++
TORQUE CONTROL Rated speed rpm	: 1200	+
Rated speed rpm rack travel mm Tolerance mm	: 850 : −1.00 : + 0.10	+
Rated speed rpm rack travel mm Tolerance mm	: 700 : -6.00 : +- 0.20	++++
Rated speed rpm rack travel mm Tolerance mm	: 700 : −1.80 : ← 0.20	++++
ANEROID/ALTITUDE COMPENSATOR TEST		++++
SETTING		+
Rated speed rpm Pressure hPa	: 1200 : 1200	+++++++++++++++++++++++++++++++++++++++
		+

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : - : -3.20 : +- 0.20
MEASUREMENT	4200
Rated speed rpm	: 1200
Pressure hPa rack travel mm Tolerance mm	: 200 : -2.40 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 440 : -1.10 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 130 : < 275
Check speed 1/min Check	: > 110
speed 1/min	: < 285
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 850
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 850
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 850 : 249.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1200 : 850 : 249.0 : +- 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1200 : 850 : 249.0 : +- 3.0 : +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 850 : 249.0 : +- 3.0 : +- 6.0 : 700 : 153.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 850 : 249.0 : +- 3.0 : +- 6.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 100.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm 325

Rack travel in mm : -8.90

Tolerance mm : **←** 0.10

Del. quantity cm3/1000 strokes : 33.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes :

8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 09.07.97 : ISO 4113

Combination No.

: 0 402 746 607

Injection pump

Pump designation : PES6P12DA72ORS7409 EP type number : 0 412 726 956

Governor

Governer design. : RQV450...1100PA1270

Governer no. : 0 421 814 172

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8465.41.014 : 190.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5

Overflow quantity

185 min, L/h min. L/h : 185 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 5.15 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : ÷- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

1	
Rack travel in mm: 10.90 Tolerance mm: +- 0.05	- Rated speed rpm : 580 - guide sleeve - travel mm : 3.81
Del. quantity cm3/1000 strokes : 168.0	Tolerance mm : +- 0.25
<u></u>	- Rated speed rpm : 1550
Tolerance +	- guide sleeve
cm3/1000 strokes : + 1.0	- travel mm : 11.50
1	- Tolerance mm : +- 0.50
Check tolerance cm3/1000S. : +- 4.0	
+	- GUIDE SLEEVE POSITION
Spreed	•
<u> </u>	•
Tolerance	- control lever
cm $3/1000$ strokes : 5.0	- position degree : - 1
	- Rated speed rpm : 1400
Check tolerance	•
cm3/1000s. : 9.0	- Rack travel in mm : 8.40
T 7.0	
	Tolerance mm : +- 2.70
†	•
+	
Rated speed rpm : 450	- FULL LOAD DELIVERY AT FULL LOAD STOP
	•
Rack travel in mm: 5.30	- Rated speed rpm : 1100
	- Aneroid pressure
Del. quantity	- hPa : 900
cm3/1000 strokes : 22.0	- Del. quantity
Tolerance	- cm3/1000 strokes : 168.0
cm3/1000 strokes : + 3.0	- Tolerance
Check tolerance	- cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 6.0	Check tolerance
Spreed	- cm3/1000s. : +- 4.0
Tolerance +	Spreed
cm3/1000 strokes : 8.0	Tolerance
Check tolerance	cm3/1000 strokes : 5.0
cm3/1000s. : 12.0 +	Check tolerance
+	- cm3/1000s. : 9.0
+	•
(B) SETTING OF INJECTION PUMP	•
WITH GOVERNOR	
	CONTROL LEVER
	•
GUIDE SLEEVE TRAVEL	control lever
1	position degree : 121.0
Rated speed rom : 1164	
The same of the sa	tolerance degree : +- 4.0
guide sleeve	
travel mm : 7.81	RATED SPEED
Tolerance mm : +- 0.15	rack travel mm : 9.90
 	Rated speed rpm : 1150
Rated speed rpm : 450	Tolerance 1/min : +- 5
guide sleeve	· Check
travel mm : 2.71	speed 1/min : +- 10
Tolerance mm : + 0.20	
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	rack travel mm : 4.00
Rated speed rpm : 856	Rated speed rpm : 1270
guide steeve	Tolerance 1/min : +- 15
travel mm : 5.85	Check
Tolerance mm : \leftarrow 0.25 $+$	speed 1/min : +- 20

rack travel mm : 0.50 : +- 0.50 Tolerance mm Rated speed rpm : 1550

LOW IDLE

control lever

position degree : 70.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 350

CRT mm min. :> 6.80

Testing:

Rated speed rpm 450 5.30 rack travel mm Tolerance mm : +- 0.10

Rated speed rpm : 430

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm 10.90 : +- 0.05 Tolerance mm

rack travel mm : 700 10.95 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 700 Pressure hPa 900 rack travel mm 10.90 : +- 0.05 Tolerance mm

700 Rated speed rpm : Pressure hPa 10.20 rack travel mm : +- 0.20 Tolerance mm

MEASUREMENT

Rated speed rpm : 700 Pressure hPa 400 rack travel mm 10.65 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

900 hPa 700 Rated speed rpm

Del. quantity cm3/1000 strokes : 170.0

Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000s. : +- 8.0

Aneroid pressure

hPa 700 Rated speed rpm

Del. quantity

cm3/1000 strokes : 154.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max.

control lever setting.

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : ← 19.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm : 5.30 Tolerance mm : +- 0.10Del. quantity

cm3/1000 strokes : 22.0

Tolerance
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.07.97 : ISO 4113

Combination No. : 0 402 746 610

Injection pump

Pump designation : PES6P120A720RS7409 EP type number : 0 412 726 956

Governor

Governer design. : RQV450...1050PA1277

Governer no. : 0 421 814 173

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8465.41.016 Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 180 Tolerance l/h : +- 20.0

Test nozzle holde assembly : 1 688 901 105

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.15 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +-0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

	1
Rack travel in mm : 11.55 Tolerance mm : +- 0.05	Rated speed rpm : 580 guide sleeve
	+ travel mm : 3.81
Del. quantity cm3/1000 strokes : 184.0	Tolerance mm : +- 0.25
	+ Rated speed rpm : 1550
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0	
CIIDA TODO SCHOKES : TO 1.0	+ travel mm : 11.50
	+ Tolerance mm : + 0.50
Check tolerance	+
cm3/1000s. : +- 4.0	
	→ GUIDE SLEEVE POSITION
Spreed	
05. 664	
Talamana	T
Tolerance	+ control lever
cm3/1000 strokes : 5.0	+ position degree : - 1
	+ Rated speed rpm : 1375
Check tolerance	
cm3/1000s. : 9.0	+ Rack travel in mm : 10.00
CIII37 10003 7.0	
	+ Tolerance mm : + 2.70
	+
Rated speed rpm : 450	FULL LOAD DELIVERY AT FULL LOAD STOP
	1
Rack travel in mm : 5.20	Detect aread arm . 1050
	+ Rated speed rpm : 1050
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 900
cm3/1000 strokes : 22.0	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 184.0
cm3/1000 strokes : +- 3.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : +- 4.0
Tolerance	Spreed
cm3/1000 strokes : 8.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	+ Check tolerance
	+ cm3/1000S. : 9.0
	+
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	
	CONTROL LEVER
	CONTROL LLVER
CHINE OF ECHE TOWNER	T control love
GUIDE SLEEVE TRAVEL	t control lever
	+ position degree : 118.0
Rated speed rpm : 1110	+ tolerance degree : +- 4.0
guide sleeve	+
travel mm : 7.40	+ RATED SPEED
Tolerance mm : +- 0.10	+ rack travel mm : 10.50
TOTAL THE THE THE TANK THE TAN	
D-A 1	+ Rated speed rpm : 1095
Rated speed rpm : 450	+ Tolerance 1/min : +- 5
guide sleeve	+ Check
travel mm : 2.71	+ speed 1/min : + 10
Tolerance mm : +- 0.20	1
TOTAL THE STATE OF	rack travel mm : 4.00
Rated speed rpm : 836	,
	+ Rated speed rpm : 1240
guide sleeve	+ Tolerance 1/min : +- 15
travel mm : 5.75	+ Check
Tolerance mm : +- 0.25	+ speed 1/min : +- 20

rack travel mm 0.50 Tolerance mm : +- 0.50Rated speed rpm : 1550

LOW IDLE

control lever

position degree : 70.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 350

CRT mm min. : > 6.70

Testing:

Rated speed rpm 450 rack travel mm 5.20 Tolerance mm : +- 0.10

Rated speed rpm : 440

TORQUE CONTROL

Rated speed rpm : 1050 rack travel mm : 11.55 Tolerance mm : +- 0.05

Rated speed rpm 600 11.60 rack travel mm : : +- 0.10 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 600 : Pressure hPa 900 11.55 rack travel mm : +- 0.05 Tolerance mm

Rated speed rpm 600 : Pressure hPa : rack travel mm 10.85 Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 600 rack travel mm :
Tolerance mm 360 11.30 : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 900 Rated speed rpm 600 Del. quantity

cm3/1000 strokes : 203.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. : +-6.0

Aneroid pressure

Rated speed rpm 600 Del. quantity

cm3/1000 strokes : 178.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-4.0

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm : 5,20 Tolerance mm : +- 0.10 Del. quantity

cm3/1000 strokes : 22.0 Tolerance
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.07.97 Test oil : ISO 4113

Combination No. : 6 402 846 081

Injection pump

Pump designation : PE6P120A320RS8044 EP type number : 0 412 826 036

Governor

Governer design. : RQV300...950PA1355K

Governer no. : 0 421 815 962

Cust. part No. : 11127026

: -P02 V.08/96

Customer-spec. information

Customer : VCE

Motor

: TD122KLE

Power KW : 200.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 11.00

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm : 12.80 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 269.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

		+ Tolerance mm : +- 0.50
Check tolerance cm3/1000s.	: +- 4.0	
Spreed		+ GUIDE SLEEVE POSITION
Tolerance		t control lever
cm3/1000 strokes	: 8.0	<pre>position degree : - 1 Rated speed rpm : 1130</pre>
Check tolerance cm3/1000s.	: 11.0	+ Rack travel in mm : 11.62
	The face from the first first of the first complete come from the first last appropriate may come from the	Tolerance mm : +- 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm		Rated speed rpm : 950
Tolerance mm Del. quantity	: +- 0.10	+ Aneroid pressure + hPa : 1500
cm3/1000 strokes Tolerance	: 80.0	+ Del. quantity + cm3/1000 strokes : 269.0
cm3/1000 strokes	: +- 3.0	+ Tolerance
Check tolerance cm3/1000S.	: +- 6.0	+ cm3/1000 strokes : +- 1.0 + Check tolerance
Spreed Tolerance		cm3/1000s. : +- 4.0 + Spreed
cm3/1000 strokes	: 5.0	+ Tolerance
Check tolerance cm3/1000s.	: 8.G	+ cm3/1000 strokes : 8.0 + Check tolerance
		cm3/1000s. : 11.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	+
WITH GOVERNOR		CONTROL LEVER
GUIDE SLEEVE TRAV	EL	control lever
Rated speed rpm guide sleeve	: 1037	<pre>position degree : 64.0 tolerance degree : + 4.0</pre>
travel mm	9.86	t control lever
Tolerance mm	: +- 0.15	position degree : 118.0 tolerance degree : + 4.0
Rated speed rpm guida sleeve	: 300	+ RATED SPEED
travel mm	: 1.61	+ rack travel mm : 11.80
Tolerance mm	: +- 0.20	Rated speed rpm : 1015 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 773	+ rack travel mm : 4.00
travel mm	: 6.81	+ Rated speed rpm : 1100
Tolerance mm	: +- 0.25	Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 500	rack travel mm : 0.50 Tolerance mm : +- 0.50
travel mm	: 4.00	Rated speed rpm : 1210
Tolerance mm	: +- 0.25	‡
Rated speed rpm	: 1280	<u> </u>
guide sleeve travel mm	: 13.50	LOW IDLE

control lever position degree : 71.0 tolerance degree : + 4.0 control lever position degree : 17.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : > 6.56 Testina: Rated speed rpm : 300 rack travel mm : 4.20 Tolerance mm : + 0.10 Rated speed rom : 375 TORQUE CONTROL Rated speed rpm : 950 rack travel mm : 12.80 Tolerance mm : ← 0.05 Rated speed rpm : 850 rack travel mm : 13.10 Tolerance mm : + 0.10 Rated speed rpm : 800 rack travel mm : 13.40 Tolerance mm : +- 0.10 Rated speed rpm : 500 rack travel mm : 12.20 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 550 Pressure hPa : 1500
rack travel mm : 12.20
Tolerance mm : + 0.10 Rated speed rpm : 550 Pressure hPa : - rack travel mm : 10.30 Tolerance mm : +- 0.10 MEASUREMENT

Rated speed rpm : 550 Pressure hPa : 570 rack travel mm : 2.00 Tolerance mm : +- 0.10 Pressure hPa : 250 rack travel mm : 0.20 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 300.0 Tolerance cm3/1000 strokes : +- 4.0Check tolerance cm3/1000s. : +- 8.0 Aneroid pressure Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY rack travel mm : 20.50
Tolerance mm Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0 LOW IDLE Rated speed rpm : 300 Rack travel in mm : 4.20 Tolerance mm : + 0.10

Del. quantity cm3/1000 strokes	:	80.0
Tolerance		7.0
cm3/1000 strokes Check tolerance	; +	3.0
cm3/1000S.	: +-	6.0
Spreed		
Tolerance cm3/1000 strokes	:	5.0
Check tolerance		
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.04.97 : ISO 4113

Combination No.

: 0 402 890 301

Injection pump

Pump designation : PE12P120A520L88525

EP type number

: 0 412 820 203

Governor

Governer design. : RE30

Governer no.

: 0 421 890 040

Cust. part No.

: 51.11103-7552

Customer-spec. information

Customer

: MAN

Motor

: D 2842 LE 404

Power KW

: 956.0

TEST BENCH REQUIREMENTS

Inlet line

: EHAB

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve

: 2 417 413 089

Inlet press. bar :

Tolerance bar

0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm :

600

REMARKS

Pump-specific values in Section (B)

must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +-1.0

Prestroke mm 5.20 Tolerance mm : +- 0.05

Check

: + - 0.10tolerance mm

Rack travel in mm : 13.00

Tolerance mm : +- 0.50

Firing order : 1A- 5-9A- 8- 3A- 4

: -11A- 10- 2A- 6

= 7A

: 0-15-60-75-120-135 Phasing

: -180-195-240-255

: -300-315

Tolerance : + 0.50

Check

tolerance "NW : + 0.75

Start of delivery blocking

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no.

: 12

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) Uact V 3.100 CRT mm 13.00 : +/- 0.05 Tolerance mm Check tolerance mm : +/- 0.10 Check value (P, R and H pump) Uact V 1.700 : CRT mm 6.15 : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30 Setting point (M pump) 12.50 Uact V 3.100 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (M pump) 1.700 Uact V CRT mm 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. CRT mm 0.75 Tolerance mm : +/- 0.25 Check

: +/- 0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V : 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20 Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 1150 3.360

Rated speed rpm Uact V Del. quantity cm3/1000 strokes : 332.0 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. : +-4.0 Spreed Tolerance cm3/1000 strokes : Check tolerance cm3/1000s.12.0 FUEL DELIVERY CHARACTERISTICS

Rated speed rpm 500 Uact V 2.220 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. : +-9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Delivery for shutoff assemblies (refer to cam sequence).
Arbitrary delivery for standard plunger

tolerance mm

barrel assemblies.

Rated speed rpm : 500 Uact V : 1.940

Del. quantity

cm3/1000 strokes : 0.1

Tolerance

cm3/1000 strokes : +- 0.1

Check tolerance

cm3/1000s. : + 0.1

Delivery for shutoff assemblies (refer to cam sequence). Arbitrary delivery for standard plunger barrel assemblies.

Rated speed rpm : 500 Uact V : 2.160

Del. quantity

cm3/1000 strokes : 165.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : + 15.0

TEST POINT L1

Delivery for standard plunger/barrel assemblies. Zero delivery for shutoff assemblies (refer to cam sequence).

Rated speed rpm : 300 Uact V : 1.600 Tolerance Volt : + 0.060

Check tolerance

Volt : + 0.080

Del. quantity

cm3/1000 strokes : 24.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.07.97 Test oil : ISO 4113

Combination No. : 0 403 246 056

Injection pump

Pump designation : PES6MW100/720RS1527

EP type number : 0 413 206 026

Governor

Governer design. : RQV300...1300MW157

Governer no. : 0 420 083 343

Cust. part No. : 0270740502

Customer-spec. information : MB-NFZ Customer : 0M366LA Motor Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 4.55 Tolerance mm : +- 0.05 Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.45

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 133.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: +- 4.0 cm3/1000s.

Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. : 4.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1354 guide sleeve travel mm : 6.71 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.01 Tolerance mm : + 0.20 Rated speed rpm : 1100 guide sleeve travel mm : 4.76 Tolerance mm : 4.76 Tolerance mm : + 0.25 Rated speed rpm : 710		
Check tolerance Cm3/1000s.: 8.0 Check tolerance Cm3/1000s.: 8.0 Check tolerance Cm3/1000s.: 8.0 Check travel in mm: 4.00 Tolerance mm: +- 0.10 Del. quantity Cm3/1000 strokes: 12.0 Check tolerance Cm3/1000s.: +- 4.5 Spreed Tolerance Cm3/1000s.: +- 4.5 Spreed Tolerance Cm3/1000s.: +- 4.5 Spreed Tolerance Cm3/1000s.: +- 4.5 Check tolerance Cm3/1000s.: 4.0 Check tolerance Cm3/1000s.:	Spreed	
Rated speed rpm : 300 Rack travel in mm : 4.00 Folerance mm : +- 0.10 Folerance mm : +- 0.10 Folerance Final/1000 strokes : 12.0 Folerance Final/1000 strokes : +- 2.0 Folerance Final/1000 strokes : +- 4.5 Foreed Folerance Final/1000 strokes : 2.0 Folerance Fina		: 5.0
Rack travel in mm : 4.00 Tolerance mm : +- 0.10 Del. quantity DM3/1000 strokes : 12.0 Tolerance DM3/1000 strokes : +- 2.0 Check tolerance DM3/1000S. : +- 4.5 DM3/1000S. : +- 4.5 DM3/1000S. : +- 4.5 DM3/1000S. : +- 4.0 Check tolerance DM3/1000S. : 4.0 CHECK TOLERANCE CHECK TOLERANCE DM3/100OS. : 4.0 CM3/100OS. : 4.0 CM3/10OOS. :		: 8.0
Tolerance mm : +- 0.10 Del. quantity Cm3/1000 strokes : 12.0 Tolerance Cm3/1000 strokes : +- 2.0 Check tolerance Cm3/1000s. : +- 4.5 Spreed Tolerance Cm3/1000 strokes : 2.0 Check tolerance Cm3/1000 strokes : 2.0 Check tolerance Cm3/1000s. : 4.0 (B) SETTING OF INJECTION PUPIP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1354 guide sleeve travel mm : 6.71 Tolerance mm : +- 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.01 Tolerance mm : +- 0.20 Rated speed rpm : 1100 guide sleeve travel mm : 4.76 Tolerance mm : +- 0.25 Rated speed rpm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 3.03	Rated speed rpm	: 300
cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. : 4.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1354 guide sleeve travel mm : 6.71 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.01 Tolerance mm : + 0.20 Rated speed rpm : 1100 guide sleeve travel mm : 4.76 Tolerance mm : + 0.25 Rated speed rpm : 710 guide sleeve travel mm : 4.76 Tolerance mm : + 0.25 Rated speed rpm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 3.03	Tolerance mm	
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. : 4.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1354 guide sleeve travel mm : 6.71 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.01 Tolerance mm : + 0.20 Rated speed rpm : 4.76 Tolerance mm : 4.76 Tolerance mm : + 0.25 Rated speed rpm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710	cm3/1000 strokes	: 12.0
Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. : 4.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1354 guide sleeve travel mm : 6.71 Tolerance mm : 4.76 Tolerance mm : 1.00 guide sleeve travel mm : 4.76 Tolerance mm : 4.76 Tolerance mm : 4.76 Tolerance mm : 4.76 Tolerance mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710		: +- 2.0
Cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. : 4.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1354 guide sleeve travel mm : 6.71 Tolerance mm : 4.76 Tolerance mm : 1.00 Rated speed rpm : 300 guide sleeve travel mm : 1.01 Tolerance mm : 1.02 Rated speed rpm : 100 guide sleeve travel mm : 4.76 Tolerance mm : 4.76 Tolerance mm : 4.76 Tolerance mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710	cm3/1000s. Spreed	: +- 4.5
Cm3/1000s. : 4.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1354 guide sleeve travel mm : 6.71 Tolerance mm : 4.76 Rated speed rpm : 100 guide sleeve travel mm : 1.01 Folerance mm : 4.76 Folerance mm : 4.76 Folerance mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 710		2.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1354 guide sleeve travel mm : 6.71 Tolerance mm : 4.01 Rated speed rpm : 1.01 Tolerance mm : 1.01 Tolerance mm : 1.00 Rated speed rpm : 1100 guide sleeve travel mm : 4.76 Tolerance mm : 4.76 Tolerance mm : 4.76 Rated speed rpm : 710 guide sleeve travel mm : 710 guide sleeve travel mm : 3.03		: 2.0
guide sleeve travel mm : 1.01 Folerance mm : +- 0.20 Rated speed rpm : 1100 guide sleeve travel mm : 4.76 Folerance mm : +- 0.25 Rated speed rpm : 710 guide sleeve travel mm : 3.03	Check tolerance cm3/1000s.	: 4.0
Rated speed rpm : 1100 guide sleeve travel mm : 4.76 Folerance mm : 710 guide sleeve guide sleeve travel mm : 3.03	Check tolerance cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm	: 4.0 JECTION PUMP EL : 1354 : 6.71
guide sleeve travel mm : 4.76 Folerance mm : + 0.25 Rated speed rpm : 710 guide sleeve travel mm : 3.03	Check tolerance cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVE rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 4.0 JECTION PUMP EL : 1354 : 6.71 : +- 0.15 : 300
Folerance mm : + 0.25 Rated speed rpm : 710 guide sleeve travel mm : 3.03	Check tolerance cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 4.0 JECTION PUMP EL : 1354 : 6.71 : +- 0.15 : 300 : 1.01
guide sleeve travel mm : 3.03	Check tolerance cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 4.0 JECTION PUMP EL : 1354 : 6.71 : +- 0.15 : 300 : 1.01 : +- 0.20 : 1100
	Check tolerance cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: 4.0 JECTION PUMP EL : 1354 : 6.71 : +- 0.15 : 300 : 1.01 : +- 0.20 : 1100 : 4.76
	Check tolerance cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: 4.0 JECTION PUMP EL : 1354 : 6.71 : +- 0.15 : 300 : 1.01 : +- 0.20 : 1100 : 4.76 : +- 0.25 : 710

travel mm Tolerance mm	: 13.50 : +- 0.50
GUIDE SLEEVE POSI	TION
control lever position degree Rated speed rpm	: 117 : 1500
Rack travel in mm Tolerance mm	: 9.00 : +- 2.70
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 1300
hPa	: 1200
Del. quantity cm3/1000 strokes	: 133.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 5.0
cm3/1000s.	: 8.0
CONTROL LEVER	
control lever position degree tolerance degree	: 112.0 : + 4.0
RATED SPEED	47.70
rack travel mm Rated speed rpm	: 13.40 : 1345 _
Tolerance 1/min	: +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1485 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1600
LOW IDLE	

guide sleeve

Rated speed rpm : 1683 guide sleeve travel mm : 12.0

Tolerance mm

Rated speed rpm

: 12.00 : +- 0.25

: 1780

control lever position degree tolerance degree	: 65.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 200
CRT mm min.	: > 4.30
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.00 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1300 : 14.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.45 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 14.40 : +- 0.10
Rated speed rpm Pressure hPa Tolerance mm	: 500 : - : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 600 : 4.20 : +- 0.10
Pressure hPa rack travel mm Tolerance mm	: 250 : 1.00 : + 0.10
Start interlock	
Rated speed rpm	: > 100

Check speed 1/min Check speed 1/min	: > 80 : < 220
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 750 : 132.0
Check tolerance	: +- 2.0
cm3/1000s. Spreed	: +- 5.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 6.0 : 9.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 500 : 52.5 : + 1.0 : + 3.0
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 160.0 : + 5.0 : + 8.0
LOW IDLE	
Rated speed rpm	: 300
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.10

Tolerance cm3/1000 strokes	: +	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance		
cm3/1000S.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.09.96 Test oil : ISO 4113

Combination No. : 0 401 848 829

Injection pump

Pump designation : PE8P110A320LS3865 EP type number : 0 411 818 728

Governor

Governer design. : RQ250/1150PA1250 Governer no. : 0 421 801 796

Cust. part No. :

Customer-spec. information Customer : DHI Motor : V2-8NA

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 : + 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05 Check tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 8-7-2-6-3 : - 5- 4- 1

Phasing : 0-45-90-135-180 : -225-270-315

Start of delivery mark

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 11.80 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 126.0

Tolerance cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance	+ Tolerance mm : +- 0.50
cm3/1000 strokes : 6.0	GUIDE SLEEVE POSITION
Check tolerance : 10.0	control lever position degree : 109
Rated speed rpm : 250	Rated speed rpm : 700 Rack travel in mm : 15.50
Rack travel in mm : 8.10 Tolerance mm : +- 0.10 Del. quantity	Tolerance mm : +- 1.30
cm3/1000 strokes : 25.0 - Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 3.0 Check tolerance	Rated speed rpm : 1150 Aneroid pressure
cm3/1000s. : +- 6.0 Spreed	hPa : - Del. quantity
Tolerance cm3/1000 strokes : 6.0	cm3/1000 strokes : 126.0 Tolerance
Check tolerance cm3/1000s. : 10.0	cm3/1000 strokes : +- 1.0 Check tolerance
(D) OFTTING OF THE FOTTON BUILD	+ cm3/1000s. : +- 4.0 - Spreed
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Tolerance + cm3/1000 strokes : 6.0 + Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : 10.0
Rated speed rpm : 1209	
guide sleeve travel mm : 7.49	CONTROL LEVER
Tolerance mm : +- 0.15	control lever position degree : 36.0
Rated speed rpm : 250 - guide sleeve -	tolerance degree : +- 4.3
travel mm : 1.59 - Tolerance mm : + 0.20 -	control lever position degree : 98.0 tolerance degree : +- 4.0
Rated speed rpm : 1150 - guide sleeve -	RATED SPEED
travel mm : 7.00 - Tolerance mm : + 0.10 -	rack travel mm : 10.80 Rated speed rpm : 1203 Tolerance 1/min : +- 5
Rated speed rpm : 411 - guide sleeve -	rack travel mm : 4.00
travel mm : 5.37 - Tolerance mm : + 0.10 -	Rated speed rpm : 1260 Tolerance 1/min : +- 15
Rated speed rpm : 510 - guide sleeve	rack travel mm : 0.50 Tolerance mm : +- 0.50
travel mm : 7.00 - Tolerance mm : +- 0.10 -	Rated speed rpm : 1350
Rated speed rpm : 1340 - guide sleeve -	
travel mm : 11.50 -	LOW IDLE

control lever position degree : 77.0 tolerance degree : +- 4.0 control lever position degree : 14.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. : > 9.90 Testing: Rated speed rpm 250 rack travel mm 8.10 : + 0.10 Tolerance mm : 2.00 rack travel mm Rated speed rpm 400 Tolerance 1/min : +- 20 TORQUE CONTROL Rated speed rpm : 1150 11.80 rack travel mm : +- 0.05 Tolerance mm : 650 : 11.80 Rated speed rom rack travel mm : + 0.10Tolerance mm Start interlock Rated speed rpm : > 100 Rated speed rpm : < 170 Check speed 1/min : > 80 Check ; < 190 speed 1/min FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 650 Del. quantity

Check tolerance cm3/1000s. : +- 6.0 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Rated speed rpm : 250 Rack travel in mm : 8.10 Tolerance mm : +- 0.10 Del. quantity 25.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s.: +-6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

End of test specification sheet

Tolerance

cm3/1000 strokes : 127.0

cm3/1000 strokes : +- 3.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 18.09.96 Test oil : ISO 4113

Combination No. : 0 401 848 830

Injection pump

Pump designation : PE8P110A320LS3865 EP type number : 0 411 818 728

Governor

Governer design. : RQV250...1000PA1286

Governer no. : 0 421 814 175

Cust. part No. :

Customer-spec. information Customer : DHI Motor : V2-8TC

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.30

Check

tolerance °NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.00 Tolerance mm : +- 0.05

	+ guide sleeve
Del. quantity cm3/1000 strokes : 142.0	travel mm : 3.20 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1300 guide sleeve
Check tolerance cm3/1000s. : +- 4.0	travel mm : 11.50 Tolerance mm : + 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 6.0	control lever
Check tolerance cm3/1000s. : 10.0	+ position degree : - 1 + Rated speed rpm : 1120 +
	+ Rack travel in mm : 12.00 + Tolerance mm : +- 2.00
Rated speed rpm : 250	Ī
	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 8.20 Tolerance mm : +- 0.10	+ Rated speed rpm : 1000
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 25.0	+ hPa : -
Tolerance	+ Del. quantity
cm3/1000 strokes : +- 3.0	+ cm3/1000 strokes : 142.0
Check tolerance	† Tolerance
cm3/1000s. : +- 6.0	+ cm3/1000 strokes : + 1.0
Spreed	+ Check tolerance
Tolerance cm3/1000 strokes : 6.0	+ cm3/1090s. : +- 4.0
cm3/1000 strukes : 6.0 Check tolerance	+ Spreed + Tolerance
cm3/1000s. : 10.0	+ cm3/1000 strokes : 6.0
. 10.0	+ Check tolerance
	+ cm3/1000s. : 10.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	1
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	†
Rated speed rpm : 1058	+ control lever + position degree : 65.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 8.56	toterance degree : 4.0
Tolerance mm : +- 0.15	+ control lever
	+ position degree : 120.3
Rated speed rpm : 250 guide sleeve	tolerance degree : + 4.0
travel mm : 1.31	A RATED SPEED
Tolerance mm : +- 0.20	+ rack travel mm : 12.00
	+ Rated speed rpm : 1045
Rated speed rpm : 666 guide sleeve	Tolerance 1/min : + 5
travel mm : 5.29	rack travel mm : 4.00
Tolerance mm : +- 0.25	Rated speed rpm : 1155
The second secon	Tolerance 1/min : +- 15
Rated speed rpm : 380	rack travel mm : 0.50
	1 Tack Clavec min . U.JU

Tolerance mm Rated speed rpm	: +- 0.50 : 1300
LOW IDLE	
control lever position degree tolerance degree	: 71.0 : +- 4.0
control lever position degree tolerance degree	: 16.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 150
CRT mm min.	; > 9.60
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 8.20 : +- 0.10
Rated speed rpm	: 400
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.00 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 13.00 : +- 0.10
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 190
Check speed 1/min Check	: > 80
speed 1/min	: < 210
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: - : 650

Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 125.0
LOW IDLE	
Rated speed rpm	: 250
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +- 0.10 : 25.0 : +- 3.0 : +- 6.0
cm3/1000 strokes Check tolerance cm3/1000S.	: 6.0 : 10.0
End of test speci	fication sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 13.09.96 : ISO 4113 Test oil Combination No. : 0 402 074 700 Injection pump Pump designation : PES4Pi1CB72CRS3383 EP type number : 0 412 014 701 Governor Governer design. : RSV300...1100P1A667 Governer no. : 0 421 833 582 Cust. part No. : 9880955 Customer-spec. information Customer : LIEBHERR : D 926 TI-E A2 Motor Power KW : 147.0 TEST BENCH REQUIREMENTS Inlet line : 4.1 Test oil inlet temp. °C 40 temp. °C : 40 Tolerance °C : +- 2.0 Overflow valve : 1 417 413 049 Inlet press. bar : 1.5 Tolerance bar : +- 0.1 Tolerance l/h: +- 10.0 Test nozzle holde : 1 688 901 101 assembly Opening pressure 207.0

Outside diameter : 6.0 x inside diameter : 2.0 x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 Prestroke mm : 3.20 Tolerance mm : +- 0.05 Check tolerance mm : +- 0.10 Rack travel in mm : 10.50 Tolerance mm : +- 1.50 Firing order : 1-3-4-2 Phasing : 0-90-180-270 Tolerance : +- 0.50 Check tolerance °NW : +- 0.75 Start of delivery mark Barrel no. : 1 BASIC SETTING Rated speed rpm : 1000 Rack travel in mm : 13.00 Tolerance mm : +- 0.05 Del. quantity cm3/1000 strokes : 189.0

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Tolerance bar : + 1.5

Test lines : 1 680 750 008

Tolerance cm3/1000 strokes : +- 1.0	Spreed Tolerance
Check tolerance	cm3/1000 strokes : 4.0 Check tolerance
cm3/1000s. : +- 3.5	cm3/1000s. : 7.5
Spreed -	
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance	control lever position degree : 106.0
cm3/1000s. : 7.5	tolerance degree : +- 4.0
4	RATED SPEED
Rated speed rpm : 400	rack travel mm : 12.00 Rated speed rpm : 1030
•	Tolerance 1/min : +- 5
Rack travel in mm: 4.00	
Tolerance mm : +- 0.10 - Del. quantity -	rack travel mm : 4.00 Rated speed rpm : 1090
cm3/1000 strokes : 20.0	Tolerance 1/min : +- 15
Tolerance -	
cm3/1000 strokes : + 3.0 - Check tolerance -	Tolerance mm : +- 0.55
cm3/1000s. : + 5.5	rack travel mm : 4.00
Spreed -	Rated speed rpm : 1095
Tolerance -	Tolerance 1/min : +- 15
cm3/1000 strokes : 4.5 - Check tolerance -	
cm3/1000s. : 7.5	
-	LOW TOLE
(B) SETTING OF INJECTION PUMP	LOW IDLE
WITH GOVERNOR	
•	- control lever
•	position degree : 78.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0
·	Setting point w/out bumper spring
control lever	Rated speed rpm : 400
position degree : - 3	rack travel mm : 3.80 - Tolerance mm : +- 0.10
governor spring -	- roterance min . +- 0.10
pre-tension -	- Testing:
click setting x : 4.00	
	Rated speed rpm : 400
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.00 Tolerance mm : +- 0.10
Rated speed rpm : 1000	TOROUT CONTROL
Aneroid pressure hPa : 1420	- TORQUE CONTROL - Rated speed rpm : 1000
Del. quantity	rack travel mm : 13.00
cm3/1000 strokes : 189.0	rack travel mm : 13.00 - Tolerance mm : +- 0.05
Tolerance	-
cm3/1000 strokes : + 1.0 - Check tolerance	- Rated speed rpm : 500 - rack travel mm : 13.00
cm3/1000s. : +- 3.5	Tolerance mm : +- 0.10
CM3/1000. : TT 3.3	F loterance mm : += ti.iii

Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.00 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1420 : 1.80 : ← 0.10
Rated speed rpm Pressure hPa Tolerance mm	: 550 : - : + 0.10
MEASUREMENT	
Rated speed rpm	: 550
Pressure hPa rack travel mm Tolerance mm	: 910 : 1.20 : + 0.05
Pressure hPa rack travel mm Tolerance :nm	: 820 : 0.40 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1420 : 500 : 213.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1420 : 700 : 203.0 : +- 3.0 : +- 6.0

Intake CRT corresponds to 0 mm $\mbox{\it CRT}$ with LDA test.

Aneroid pressure			
hPa	:		_
Rated speed rpm	:		550
Del. quantity			
cm3/1000 strokes	•		177.0
Tolerance			
cm3/1000 strokes	:	+-	1.0
Check tolerance			
cm3/1000s.	•	+-	3.5

STARTIN	AC E		UEL	THEON
SIMPLE	1 DV	UEL	レヒレ	TACKE

Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.50 : + 0.50
Del. quantity cm3/1000 strokes Tolerance	: 155.0
cm3/1000 strokes Check tolerance	: +- 15.0
cm3/1000s.	: +- 19.0

LOW IDLE

Rated speed rpm	:	400	
Rack travel in mm Tolerance mm	: +-	4.00 0.10	
Del. quantity cm3/1000 strokes Tolerance	•	20.0	
cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000S. Spreed	: +-	5.5	
Tolerance cm3/1000 strokes Check tolerance	:	4.5	
cm3/1000s.	:	7.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.09.96 : ISO 4113

Combination No. : 0 402 646 667

Injection pump

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1278K

Governer no. : 0 421 815 509

Cust. part No. : 1310221/1

Customer-spec. information Customer : DAF

Motor

: XF 315 M

Power KW : 315.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar :

Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 13.10

Tolerance mm : +- 0.05

	+ guide sleeve
Del. quantity	travel mm : 3.92
cm3/1000 strokes : 327.0	+ Tolerance mm : +- 0.25
Tolerance	+ Rated speed rpm : 1310
cm3/1000 strokes : +- 1.0	† guide sleeve
	+ travel mm : 13.50
Check tolerance	† Tolerance mm : +- 0.50
cm3/1000s. : +- 4.0	†
Spreed	GUIDE SLEEVE POSITION
Spi ecq	I GOIDE SLEEVE POSTITON
Tolerance	\prod
cm3/1000 strokes : 5.0	control lever
	position degree : - 1
Check tolerance	+ Rated speed rpm : 1158
cm3/1000s. : 9.0	+
	+ Rack travel in mm : 12.00
	† Tolerance mm : +- 2.70
	+
Rated speed rpm : 275	
Rack travel in mm : 4.00	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.00 Tolerance mm : + 0.10	Dated aread are
Del. quantity	+ Rated speed rpm : 980 + Aneroid pressure
cm3/1000 strokes : 17.0	
Tolerance	+ hPa : 1500 + Del. quantity
cm3/1000 strokes : +- 3.0	- cm3/1000 strokes : 327.0
Check tolerance	+ Tolerance
cm3/1000s. : +- 6.0	- cm3/1000 strokes : +- 1.0
Spreed	+ Check tolerance
Tolerance	+ cm3/1000s. : +- 4.0
cm3/1000 strokes : 8.0	+ Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0
	+ Check tolerance
	+ cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 1077	t control lever
Rated speed rpm : 1077 guide sleeve	<pre>position degree : 119.0 tolerance degree : + 4.0</pre>
travel mm : 10.24	T coverance degree : T 4.0
Tolerance mm : + 0.15	T RATED SPEED
	+ rack travel mm : 12.10
Rated speed rpm : 275	Rated speed rpm : 1050
guide sleeve	Tolerance 1/min : +- 5
travel mm : 2.04	Check
Tolerance mm : + 0.20	+ speed 1/min : +- 10
	+
Rated speed rpm : 704	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1145
travel mm : 6.53	+ Tolerance 1/min : +- 15
Tolerance mm : +- 0.25	Check
	+ speed 1/min : +- 20
Rated speed rpm : 400	†
	+ rack travel mm : 0.50

Tolerance mm : +- 0.50 Rated speed rpm : 1275	Rated speed rpm : 980 Pressure hPa : 1500 rack travel mm : 13.10 Tolerance mm : +- 0.05
LOW IDLE	Rated speed rpm : 980 Pressure hPa : - rack travel mm : 7.75 Tolerance mm : +- 0.20
control lever position degree : 72.0 tolerance degree : +- 4.0	MEASUREMENT
Setting point w/out bumper sprir	Rated speed rpm : 980
Rated speed rpm : 175	Pressure hPa : 650 + rack travel mm : 11.50
CRT mm min. : > 7.00	+ Tolerance mm : +- 0.05
Testing: Rated speed rpm : 275 rack travel mm : 4.00	Pressure hPa : 250 rack travel mm : 8.75 Tolerance mm : +- 0.10
Tolerance mm : +- 0.10 Rated speed rpm : 30C	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL Rated speed rpm : 980 rack travel mm : 13.10 Tolerance mm : +- 0.05	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 344.0
Rated speed rpm : 750 rack travel mm : 12.85 Tolerance mm : +- 0.05	Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 5.0
Rated speed rpm : 700 rack travel mm : 12.50 Tolerance mm : +- 0.10	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm : 600 rack travel mm : 11.95 Tolerance mm : +- 0.10	Aneroid pressure
Rated speed rpm : 500 rack travel mm : 11.50 Tolerance mm : + 0.10	+ hPa : - Rated speed rpm : 600 Del. quantity
Rated speed rpm : 1000	cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0
rack travel mm : 13.10 Tolerance mm : +- 0.10	+ Check tolerance + cm3/1000S. : +- 4.0 - Spreed
ANEROID/ALTITUDE COMPENSATOR TEST	Tolerance cm3/1000 strokes : 8.0 Check tolerance
SETTING	cm3/1000s. : 12.0

LOW IDLE

Rated speed rpm	:		275
Rack travel in mm Tolerance mm Del. quantity	:	+	4.00 0.10
cm3/1000 strokes Tolerance	:		17.0
cm3/1000 strokes Check tolerance	:	+	3.0
cm3/1000s. Spreed	:	+-	6.0

Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s.

: 12.0

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W4DD/...

Edition : 16.09.96 Test oil : ISO 4113

Combination No. : 0 402 646 670

Injection pump

Pump designation : PE6P12OA32ORS7421 EP type number : 0 412 626 956

Governor

Governer design. : RQV275...115CPA1296K

Governer no. : 0 421 815 523

Cust. part No. : 1316183

Customer-spec. information Customer : DAF

Motor : PF 230 M Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

: 150 min. L/h Tolerance l/h: + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50 Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1130

Rack travel in mm : 13.00 Tolerance mm : + 0.05

	+ guide sleeve
Del. quantity	travel mm : 3.85
cm3/1000 strokes : 228.0	Tolerance mm : +- 0.25
CIII37 1000 311 0K83 .	Total ance likil : +- U.25
Tolerance	T Dotted aread now 1/00
cm3/1000 strokes : +- 1.0	+ Rated speed rpm : 1480
CIIIDA TOUD STROKES : + 1.0	+ guide steeve
	+ travel mm : 13.50
Check tolerance	† Tolerance mm : +- 0.50
cm3/1000s. : +- 4.0	+
Spreed	+ GUIDE SLEEVE POSITION
	+
Tolerance	+
cm3/1000 strokes : 5.0	† control lever
	+ position degree : - 1
Check tolerance	+ Rated speed rpm : 1321
cm3/1000s. : 9.0	
	+ Rack travel in mm : 12.25
	+ Tolerance mm : +- 1.30
	1
Rated speed rpm : 275	
nated speed i pin : 213	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.00	I TOLL LOAD DELIVERY AT FOLL LOAD STOP
Tolerance mm : +~ 0.10	Rated speed rpm : 1130
Del. quantity	- Aneroid pressure
cm3/1000 strokes : 16.0	+ hPa : 1500
Tolerance	+ Del. quantity
cm3/1000 strokes : + 3.0	+ cm3/1000 strokes : 228.0
Check tolerance	+ Tolerance
cm3/1000s. : +- 6.0	+ cm3/1000 strokes : +- 1.0
Spreed	† Check tolerance
Tolerance	+ cm3/1000s. : +- 4.0
cm3/1000 strokes : 8.0	+ Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0
	+ Check tolerance
	- cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	1
WITH GOVERNOR	1
WE THE GOVERNOR	
	- CONTROL LEVER
GUIDE SLEEVE TRAVEL	COMINGE EEVEN
GOIDE OFFERE LUMBER	t control lever
Rated speed rpm : 1201	
	position degree : 119.0
guide sleeve travel mm : 10.07	tolerance degree : +- 4.0
	†
Tolerance mm : +- 0.15	+ RATED SPEED
	+ rack travel mm : 12.00
Rated speed rpm : 275	+ Rated speed rpm : 1190
guide sleeve	+ Tolerance 1/min : +- 5
travel mm : 1.71	+ Check
Tolerance mm : + 0.20	+ speed 1/min : + 10
	+
Rated speed rpm : 811	+ rack travel mm : 4.00
guide sleeve	+ Rated speed rpm : 1315
travel mm : 6.79	+ Tolerance 1/min : +- 15
Tolerance mm : + 0.25	+ Check
	- speed 1/min : +- 20
Rated speed rpm : 450	1
Caron Operation 1 100	rack travel mm : 0.70
	1

Tolerance mm Rated speed rpm	: +- 0.70 : 1450
LOW IDLE	
control lever position degree tolerance degree	: 70.0 : +- 4.0
Setting point w/c	out bumper spring
Rated speed rpm	: 175
CRT mm min.	: > 7.60
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.00 : +- 0.10
Rated speed rpm	: 330
TORQUE CONTROL Pated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 13.00 : +- 0.05 : 1000
Noterance mm Rated speed rpm rack travel mm	: 13.20
Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: +- 0.05 : 800 : 13.00 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.30 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.55 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1150 : 13.00 : +- 0.10

ANEROID/ALTI	TUDE
COMPENSATOR	TEST

SETTING

Rated speed rpm	: 875
Pressure hPa	: 1500
rack travel mm	: 13.20
Tolerance mm	: +- 0.10
Rated speed rpm	: 375
Pressure hPa	: -
rack travel mm	: 9.05
Tolerance mm	: +- 0.10
MEASUREMENT	
Rated speed rpm	: 875
Pressure hPa	: 490
rack travel mm	: 11.50
Tolerance mm	: + 0.05
Pressure hPa	: 210
rack travel mm	: 9.45
Tolerance mm	: + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 850
cm3/1000 strokes	: 252.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- 2.0 : +- 5.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 8.0 : 12.0
Aneroid pressure	· _

Aneroid pressure
hPa : Rated speed rpm : 600
Del. quantity
cm3/1000 strokes : 167.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s.

12.0

8.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : 5.00

Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 16.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

Check tolerance cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes :

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.06.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 648 904

Injection pump

Pump designation : PE8P12OA32OLS7801-1

EP type number : 0 412 628 818

Governor

Governer design. : RQV350...1050PA866

: -9

Governer no. : 0 421 813 906

Cust. part No. :

Customer-spec. information : MB-NFZ Customer : 0/1442 A Motor Power KW : 260.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 110 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180 : -225-270-315

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 8

CRT ZERO POSITION

Rack travel in mm : 13.90 Tolerance mm : +- 0.10

+	Tolerance mm : +- 0.25
BASIC SETTING	Rated speed rpm : 570 guide sleeve
Rated speed rpm : 500	travel mm : 3.55 Tolerance mm : +- 0.25
Rack travel in mm : 13.90 Tolerance mm : + 0.10	Rated speed rpm : 900 guide sleeve
Del. quantity cm3/1000 strokes : 202.0	travel mm : 5.65 Tolerance mm : +- 0.25
Tolerance 4.0	Rated speed rpm : 1204 guide sleeve
cm3/1000 strokes : + 1.0 Check tolerance	travel mm : 10.05 Tolerance mm : +- 0.25
cm3/1000s. : + 4.0	GUIDE SLEEVE POSITION
Spreed	
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1130
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 17.25 Tolerance mm : +- 0.75
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.30 Tolerance mm: + 0.10 Del. quantity	Rated speed rpm : 500 Aneroid pressure hPa : 700
cm3/1000 strokes : 19.0	Del. quantity cm3/1000 strokes : 202.0
cm3/1000 strokes : +- 3.0 Check tolerance	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s. : + 6.0 + Spreed + Tolerance	Check tolerance cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes : 6.0 + Check tolerance +	Tolerance cm3/1000 strokes : 5.0
cm3/1000s. : 10.0	Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
+	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 121.0
Rated speed rpm : 1107 guide sleeve	tolerance degree : +- 4.0
travel mm : 8.05 Tolerance mm : + 0.25	RATED SPEED rack travel mm : 11.70
Rated speed rpm : 350	Rated speed rpm : 1095 Tolerance 1/min : +- 5
guide sleeve travel mm : 1.55	Check speed 1/min : +- 10

4	- MEASUREMENT
rack travel mm : 4.00 - Rated speed rpm : 1175 - Tolerance 1/min : +- 15 Check -	- Pressure hPa : 400 - rack travel mm : -1.50 - Tolerance mm : +- 0.05
speed 1/min : +- 20 -	-
rack travel mm : 0.75 - Tolerance mm : +- 0.75 - Rated speed rpm : 1300 -	- Pressure hPa : 475 - rack travel mm : -0.60 - Tolerance mm : +- 0.10
rated speed (pile . 1500	Pressure hPa : 925 rack travel mm : 0.15 Tolerance mm : +- 0.05
LOW IDLE	- Start interlock
control lever position degree : 70.0 tolerance degree : +- 4.0	Rated speed rpm : > 100 Rated speed rpm : < 270
Setting point w/out bumper spring	- Check - speed 1/min :> 80 - Check
Rated speed rpm : 100	speed 1/min : < 290
CRT mm min. : > 6.90 -	
Testing:	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 350 - rack travel mm : 5.30 - Tolerance mm : + 0.10 -	- Aneroid pressure - hPa : 1100 - Rated speed rpm : 1050 - Del. quantity
Rated speed rpm : 450	- cm3/1000 strokes : 182.5 - Tolerance
TORQUE CONTROL Rated speed rpm : 500 rack travel mm : 13.90	- cm3/1000 strokes : +- 1.5 - Check tolerance - cm3/1000s. : +- 4.5 - Spreed
Tolerance mm: : +- 0.10 Rated speed rpm : 1050	- Tolerance - cm3/1000 strokes : 8.0 - Check tolerance
rack travel mm : 12.70 Tolerance mm : + 0.10	- cm3/1000s. : 12.0
Rated speed rpm : 750 - rack travel mm : 14.10 - Tolerance mm : + 0.10 -	- Aneroid pressure - hPa : 1100 - Rated speed rpm : 750 - Del. quantity
ANEROID/ALTITUDE	- cm3/1000 strokes : 215.0 - Tolerance
COMPENSATOR TEST	- cm3/1000 strokes : +- 2.0 - Check tolerance - cm3/1000s. : +- 5.0
2-stage LDA setting	- Spreed - Tolerance
Rated speed rpm : 600	- cm3/1000 strokes : 8.0
Rated speed rpm : 600 - Pressure hPa : 700 - 700	- Check tolerance - cm3/1000s. : 12.0

Aneroid pressure	
hPa	: -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 144.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s. Spreed Tolerance	: ← 4.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 230.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 350 Rack travel in mm : 5.30 Tolerance mm 0.10 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.09.96 : ISO 4113 Test oil

Combination No. : 0 402 736 896

Injection pump

Pump designation : PES6P120A720/3LS7251

: -1

EP type number : 0 412 726 926

Governor

Governer design. : RQV300...1000PA962

: -14K

Governer no. : 0 421 815 499

Cust. part No. : 51.11103-7497

Customer-spec. information

: MAN Customer

: D2866 LFO6 Motor : 309.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlat

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 200 Tolerance l/h: + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

: 4.85 : + 0.05 Prestroke mm Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 13.00 Tolerance mm : +- 0.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : +- 0.10

Check

tolerance "NW : +- 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 900

	1
Rack travel in mm : 13.10 Tolerance mm : +- 0.05	Rated speed rpm : 350 guide sleeve travel mm : 3.82
Del. quantity cm3/1000 strokes : 272.0	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	+ Rated speed rpm : 1480 + guide sleeve + travel mm : 13.50
Check tolerance cm3/1000s. : +- 4.0	Tolerance mm : + 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 10.0	control lever position degree : - 1 Rated speed rpm : 1290
Check tolerance cm3/1000s. : 14.0	Rack travel in mm : 11.70 Tolerance mm : +- 2.00
Raited speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.30 Tolerance mm : +- 0.10	Rated speed rpm : 900 Aneroid pressure
Del. quantity cm3/1000 strokes : 32.0 Tolerance	+ hPa : 1200 + Del. quantity - cm3/1000 strokes : 272.0
cm3/1000 strokes : +- 3.0 Check tolerance	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 6.0 Spreed Tolerance	the Check tolerance cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes : 8.0 Check tolerance	Tolerance cm3/1000 strokes : 10.0
cm3/1000s. : 12.0	+ Check tolerance - cm3/1000s. : 14.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 285.0
Rated speed rpm : 1056 guide sleeve travel mm : 8.01	tolerance degree : +- 4.0 RATED SPEED
Tolerance mm : + 0.15	rack travel mm : 11.70 Rated speed rpm : 1045
Rated speed rpm : 300 guide sleeve	Tolerance 1/min : + 5
travel mm : 2.65 Tolerance mm : +- 0.20	+ rack travel mm : 4.00 + Rated speed rpm : 1215 + Tolerance 1/min : +- 15
Rated speed rpm : 622 guide sleeve	+ rack travel mm : 0.50
travel mm : 4.85 Tolerance mm : + 0.25	Tolerance mm : +- 0.50 + Rated speed rpm : 1350

LOW IDLE	
control lever position degree tolerance degree	: 245.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 200
CRT mm min.	: > 7.30
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.30 : + 0.10
Rated speed rpm	: 330
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 900 : 13.10 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.70 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.40 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Folerance mm	: 900 : 1200 : 13.10 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Folerance mm	: 900 : - : 9.00 : + 0.10
MEASUREMENT	
Rated speed rpm	: 900

Pressure hPa rack travel mm Tolerance mm	: 220 : 9.45 : +- 0.05
Pressure hPa rack travel mm Tolerance mm	: 720 : 12.00 : +- 0.20
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 246
Check speed 1/min Check	: > 80
speed 1/min	: < 260
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 252.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 750 : 262.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 169.0 : +- 1.0 : +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100

Del. quantity cm3/1000 strokes : 210.0 Tolerance

cm3/1000 strokes : + 15.0

Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 5.30 : + 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 32.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance cm3/1000s. : +--6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0 :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.09.96 : ISO 4113

Combination No. : 0 402 846 053

Injection pump

Pump designation : PE6P120A320RS8015 EP type number : 0 412 826 016

Governor

Governer design. : RQV300...1050PA1027K

Governer no. : 0 421 815 311

Cust. part No. : 11031702

: -P03 V.09/95

Customer-spec. information

Customer : VCE

Motor : TD122KHE

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

: +- 0.10 tolerance mm

Rack travel in mm : 11.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 800

Rack travel in mm: 10.00

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 231.0	Tolerance mm : +- 0.25 Rated speed rpm : 366
Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 2.96
Check telerance	Tolerance mm : +- 0.25
cm3/1000s. : + 4.0	+ Rated speed rpm : 470 + guide sleeve
Spreed	travel mm : 3.79 Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : 8.0	+ Rated speed rpm : 1370 + guide sleeve
Check tolerance cm3/1000s. : 11.0	travel mm : 13.50 Tolerance mm : +- 0.50
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Rack travel in mm : 4.20 Tolerance mm : +- 0.10 Del. quantity	control lever position degree : -1 Rated speed rpm : 1230
cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +- 3.0	+ Rack travel in mm: 8.50 + Tolerance mm: +- 2.50
Check tolerance cm3/1000s. : +- 6.0	- Toterarice min . +- 2.30
Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0	Rated speed rpm : 800 Aneroid pressure
cm3/1000s. : 8.0	+ hPa : 1500 + Del. quantity + cm3/1000 strokes : 231.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance cm3/1000 strokes : + 1.0
GUIDE SLEEVE TRAVEL	+ Check tolerance + cm3/1000S. : +- 4.0 + Spreed
Rated speed rpm : 1096	Tolerance cm3/1000 strokes : 8.0
guide sleeve travel mm : 9.66 Tolerance mm : +- 0.25	- Check tolerance - cm3/1000s. : 11.0
Rated speed rpm : 300 guide sleeve	CONTROL LEVER
travel mm : 2.09 Tolerance mm : +- 0.25	- control lever
Rated speed rpm : 771 guide sleeve	position degree : 63.0 tolerance degree : +- 4.0
travel mm : 6.39 Tolerance mm : +- 0.25	control lever position degree : 115.0
Rated speed rpm : 316	tolerance degree : +- 4.0
guide sleeve travel mm : 2.30	+ RATED SPEED + rack travel mm : 9.30

Rated speed rpm Tolerance 1/min	: 1085 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1165 : + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1270
LOW IDLE	
control lever position degree tolerance degree	: 70.0 : + 4.0
control lever position degree tolerance degree	: 19.0 : + 4.0
Setting point w/ou	ut bumper spring
Rated speed rpm	: 200
CRT mm min.	: > 5.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.20 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 800 : 10.00 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 10.30 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 550 : 10.90 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 690 : 10.30 : + 0.15

ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Toleranse mm	: 550 : 1500 : 10.90 : +- 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : - : 8.50 : + 0.10
MEASUREMENT	
Rated speed rpm	: 550
Pressure hPa rack travel mm Tolerance mm	: 640 : 2.00 : + 0.10
Pressure hPa rack travel mm	: 240 : 0.25
	: + 0.05 RACTERISTICS
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1500 : 1050 : 219.0 : + 3.0 : + 6.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1500 : 1050 : 219.0 : + 3.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1500 : 1050 : 219.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1500 : 1050 : 219.0 : + 3.0 : + 6.0 : 10.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 1050 : 219.0 : + 3.0 : + 6.0 : 10.0 : 14.0

Aneroid pressure

hPa : -Rated speed rpm : 550

Del. quantity

cm3/1000 strokes : 208.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 4.20 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : + 6.0

Spreed Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.09.96 Test oil : ISO 4113

Combination No. : 0 402 846 057

Injection pump

Pump designation : PE6P12OA32ORS8024 EP type number : 0 412 826 025

Governor

Governer design. : RQV250...1100PA1072

: -1K

Governer no. : 0 421 815 988

Cust. part No. : 477814P05 prel.08.96

Customer-spec. information

Customer : VOLVO-TRUCK

Motor : TD74EB Power KW : 191.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.40 Tolerance mm : + 0.05

Check tolerance mm : +- 0.10

Rack travel in mm : 7.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.05
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 204.0

Tolerance	+ guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 2.97
Check tolerance	Tolerance mm : +- 0.25
cm3/1000s. : +- 4.0	+ Rated speed rpm : 390
	+ guide sleeve
Spreed	+ travel mm : 3.22 + Tolerance mm : +- 0.25
Tolerance	Totalice iiiii . += 5.25
cm3/1000 strokes : 8.0	+ Rated speed rpm : 1390
Check tolerance	<pre>guide sleeve travel mm : 13.50</pre>
cm3/1000s. : 11.0	+ travel mm : 13.50 + Tolerance mm : +- 0.50
	+
	CHAPE OF EACH DOCATAON
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Tiddod speed Tpm	1
Rack travel in mm: 4.60	+ control lever
Tolerance mm : +- 0.10 Del. quantity	<pre>position degree : - 1 + Rated speed rpm : 1290</pre>
cm3/1000 strokes : 23.0	+ Nated speed (pii) . 1290
Tolerance	Rack travel in mm: 7.50
cm3/1000 strokes : +- 2.5 Check tolerance	Tolerance mm : +- 2.50
cm3/1000s. : +- 5.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 5.0	Poted aread area 1100
Check tolerance	+ Rated speed rpm : 1100 + Aneroid pressure
cm3/1000s. : 8.0	+ hPa : 1500
	Del. quantity
(B) SETTING OF INJECTION PUMP	+ cm3/1000 strokes : 204.0 + Tolerance
WITH GOVERNOR	+ cm3/1000 strokes : +- 1.0
	Check tolerance
GUIDE SLEEVE TRAVEL	+ cm3/1000s. : + 4.0 + Spreed
GOIDE SEEENE THAVEE	Tolerance
Rated speed rpm : 1176	+ cm3/1000 strokes : 8.0
guide sleeve travel mm : 10.15	+ Check tolerance + cm3/1000S. : 11.0
travel mm : 10.15 Tolerance mm : +- 0.25	cm3/1000s. : 11.0
	+
Rated speed rpm : 300	CONTROL LEVER
guide sleeve travel mm : 2.24	CONTROL LEVER
Tolerance mm : + 0.25	control lever
	position degree : 66.0
Rated speed rpm : 733 guide sleeve	tolerance degree : +- 4.0
travel mm : 5.39	control lever
Tolerance mm : + 0.25	position degree : 119.0
Rated speed rpm : 307	tolerance degree : + 4.0
guide sleeve	T RATED SPEED
travel mm : 2.29	rack travel mm : 12.05
Tolerance mm : +- 0.25	Rated speed rpm : 1165
Rated speed rpm : 357	+ Tolerance 1/min : +- 5
राज्यसम्बद्धाः प्राप्ति । १००० विकार	I

rack travel mm Rated speed rpm Tolerance 1/min	: 1255	Tolerance mm Rated speed rpm	
		+ Pressure hPa	• 1100
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50	rack travel mm Tolerance mm	7.00
		MEASUREMENT	
		Rated speed rpm	: 1100
LOW IDLE		Pressure hPa rack travel mm Tolerance mm	: 5.40
position degree	. 72.0	T Properties has	. 120
tolerance degree	: +- 4.0	Pressure hPa rack travel mm Tolerance mm	: 0.25
control lever		+	
position degree		+	
tolerance degree	: +- 4.0	FUEL DEL TUEDY OF	14040750707700
Setting point w/c	out bumper spring	FUEL DELIVERY C	HARACTERISTICS
Rated speed rpm	: 200	Aneroid pressure	e : 1500
CRT mm min.	: > 6.50	Rated speed rpm Del. quantity	: 650
Testing:		cm3/1000 strokes	
Rated speed rpm	: 300	cm3/1000 strokes	s · +- 25
rack travel mm		+ Check tolerance	
rack travel mm Tolerance mm	: +- 0.10	+ cm3/1000s.	
		Spreed	
Rated speed rpm	: 375	+ Tolerance	
		+ cm3/1000 strokes	
TODAUE CONTROL		+ Check tolerance	
TORQUE CONTROL	: 1100	+ cm3/1000s.	: 14.0
Rated speed rpm rack travel mm		I	
Tolerance mm		Aneroid pressure	3
		+ hPa	
Rated speed rpm	: 650	+ Rated speed rpm	: 650
rack travel mm	: 12.20	+ Del. quantity	
Tolerance mm	: +- 0.10	cm3/1000 strokes	: 105.0
Rated speed rpm	. 300	+ Tolerance	
rack travel mm	: 10.70	cm3/1000 strokes	
Tolerance mm	: + 0.30	cm3/1000s.	
		†	
ANEROID/ALTITUDE COMPENSATOR TEST		† †	
SETTING		LOW IDLE	
Rated speed rpm	• 1100	Pated speed	: 300
Pressure hPa		+ Rated speed rpm	. 500
rack travel mm		+ Rack travel in m	nm: 4.60

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : - : 7.00 : + 0.10
MEASUREMENT	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 1010 : 5.40 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 120 : 0.25 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 650
cm3/1000 strokes Tolerance	: 232.0
cm3/1000 strokes Check tolerance	: +- 2.5
cm3/1000s.	: +- 5.0
Tolerance	40.6
Check tolerance	: 10.0
cm3/1000s.	: 14.0
Aneroid pressure	
hPa Rated speed rpm	: 650
Del. quantity cm3/1000 strokes	: 105.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
cm3/ luuus.	: + 4.0
LOW IDLE	
Rated speed rpm	: 300

; +-	0.10
	23.0
•	23.0
: +-	2.5
	5.0
; —	ວ.ພ
:	5.0
:	8.0
	: +- : +- : +-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 18.09.96 : ISO 4113

Combination No. : 0 402 846 061

Injection pump

Pump designation : PE6P12DA32ORS8024-1

EP type number : 0 412 826 029

Governor

Governer design. : RQV250...1100PA1072

: -3K

Governer no.

: 0 421 815 979

Cust. part No. : 477950-P05 v. 11.95

Customer-spec. information

Customer : VOLVO-TRUCK

Motor

: TD74 EU

Power KW

: 169.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 089

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm 3.60

Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 7.20

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.40

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 175.0

Tolerance cm3/1000 strokes : +- 1.0	<pre>+ guide sleeve + travel mm : 2.97</pre>
Check tolerance	+ Tolerance mm : +- 0.25
cm3/1000s. : +- 4.0	+ Rated speed rpm : 390 + guide sleeve
Spreed	+ travel mm : 3.22 + Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1390
Check tolerance	guide sleeve travel mm : 13.50
cm3/1000s. : 11.0	Tolerance mm : +- 0.50
	GUIDE SLEEVE POSITION
Rated speed rpm : 300	‡
Rack travel in mm : 4.40	+ control lever
Tolerance mm : + 0.10	position degree : - 1
Del. quantity	+ Rated speed rpm : 1290
cm3/1000 strokes : 23.0	+
Tolerance	+ Rack travel in mm : 7.50
cm3/1000 strokes : +- 2.5	+ Tolerance mm : + 2.50
Check tolerance	+
cm3/1000s. : +- 5.0	
Spreed	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	†
cm3/1000 strokes : 5.0	+ Rated speed rpm : 1100
Check tolerance	- Arieroid pressure
cm3/1000s. : 8.0	† hPa : 1500
	+ Del. quantity
(D) CETTING OF THEFTTON DUMP	+ cm3/1000 strokes : 175.0
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
CUIDE OF THE TRAVEL	+ cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL	+ Spreed
Rated speed rpm : 1176	Tolerance
	+ cm3/1000 strokes : 8.0
guide sleeve travel mm : 10.15	+ Check tolerance + cm3/1000s. : 11.0
Tolerance mm : + 0.25	t cm3/1000s. : 11.0
FORGERICE INIT	I
Rated speed rpm : 250	
guide sleeve	CONTROL LEVER
travel mm : 1.33	John Not Leven
Tolerance mm : + 0.25	control lever
	position degree : 72.0
Rated speed rpm : 733	tolerance degree : + 4.0
guide sleeve	+
travel mm : 5.39	+ control lever
Tolerance mm : + 0.25	position degree : 118.0
	tolerance degree : +- 4.0
Rated speed rpm : 307	+
guide sleeve	+ RATED SPEED
travel mm : 2.29	rack travel mm : 10.40
Tolerance mm : + 0.25	Rated speed rpm : 1165
	Tolerance 1/min : +- 5
Rated speed rpm : 357	+

rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : +- 15 LOW IDLE control lever position degree : 65.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : +- 4.0 Setting point w/out bumper spring 200 Rated speed rpm : CRT mm min. :> 6.50Testing: Rated speed rpm : 300 rack travel mm : 4.40 : +- 0.10 Tolerance mm Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm 11.40 Tolerance mm : +- 0.05 : 650 Rated speed rpm 9.10 rack travel mm : +- 0.10 Tolerance mm 300 Rated speed rpm : rack travel mm : 8.30 Tolerance mm : \leftarrow 0.30 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1100

Tolerance mm : +- 0.10 Rated speed rpm : 1100 Pressure hPa 7.20 rack travel mm Tolerance mm : +- 0.10 **MEASUREMENT** Rated speed rpm : 1100 Pressure hPa : 580 rack travel mm 3.50 : +- 0.20 Tolerance mm Pressure hPa : 120 rack travel mm : 0.25 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1500 Rated speed rpm 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. 14.0 Aneroid pressure hPa Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s. : +- 4.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 4.40

Pressure hPa : 1500 rack travel mm : 11.40

Tolerance mm Del. quantity	: +- 0.10	
cm3/1000 strokes Tolerance	: 23.0	
cm3/1000 strokes Check tolerance	: ← 2.5	
cm3/1000s. Spreed	: +- 5.0	
Tolerance cm3/1000 strokes Check tolerance	: 5.0	
cm3/1000s.	: 8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16.09.96

Test oil

: ISO 4113

Combination No. : 0 402 846 079

Injection pump

Pump designation : PE6P12DA32DRS8D44

EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050PA1141

Governer no. : 0 421 814 091

Cust. part No. : 11031994

: -P01 V.08.96

Customer-spec. information

Customer : VCE

Motor : TD122KFF

Power KW

: 297.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance "C

: +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.50
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

	+ Tolerance mm : +- 0.25
Rack travel in mm: 11.30 Tolerance mm: +- 0.05	Rated speed rpm : 520 guide sleeve travel mm : 4.67
Del. quantity cm3/1000 strokes : 298.0	travel mm : 4.67 Tolerance mm : + 0.25 Rated speed rpm : 1310
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : + 4.0	GUIDE SLEEVE POSITION
Spreed	1
Tolerance cm3/1000 strokes : 8.0	control lever position degree : - 1 Rated speed rpm : 1180
Check tolerance cm3/1000s. : 11.0	Rack travel in mm: 11.10 Tolerance mm: + 1.30
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 3.80 Tolerance mm: + 0.10	Rated speed rpm : 700 Aneroid pressure
Del. quantity cm3/1000 strokes : 23.0	+ hPa : 1500 + Del. quantity
Tolerance cm3/1000 strokes : + 3.0	cm3/1000 strokes : 298.0 Tolerance
Check tolerance cm3/1000s. : +- 6.0	+ cm3/1000 strokes : + 1.0 + Check tolerance
Spread Tolerance	- cm3/1000s. : +- 4.0 - Spreed
cm3/1000 strokes : 5.0	Tolerance
Check tolerance cm3/1000S. : 8.0	cm3/1000 strokes : 8.0 Check tolerance
	+ cm3/1000s. : 11.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<u> </u>
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 1132 guide sleeve	position degree : 65.0 tolerance degree : + 4.0
travel mm : 8.52	control lever
	<pre>position degree : 128.0 tolerance degree : +- 4.0</pre>
Rated speed rpm : 325 guide sleeve	+ RATED SPEED
travel mm : 2.03 Tolerance mm : + 0.20	rack travel mm : 10.30 Rated speed rpm : 1120
	Tolerance 1/min : + 5
Rated speed rpm : 1039 guide sleeve	+ rack travel mm : 4.00
travel mm : 7.00	Rated speed rpm : 1190

Tolerance 1/min : + 15	MEACHDEMENT
rack travel mm : 0.50	† MEASUREMENT
Tolerance mm : +- 0.50	Rated speed rpm : 500
Rated speed rpm : 1280	Thatea speed i piii
The second secon	Pressure hPa : 850
	+ rack travel mm : 3.00 + Tolerance mm : + 0.20
	<u>_</u>
LOW IDLE	Pressure hPa : 300 rack travel mm : 0.25 Tolerance mm : + 0.05
	+ rack travel mm : 0.25
	+ Tolerance mm : +- 0.05
control lever	+
position degree : 78.0	
tolerance degree : +- 4.0	+ Start interlock
a and mail of layers	100
control lever	+ Rated speed rpm : > 100
position degree : 15.0	+ Rated speed rpm : > 230
tolerance degree : +- 4.0	
Cotting point whether hymner anning	+ Check
Setting point w/out bumper spring	speed 1/min :> 80
Rated speed rpm : 225	+ Check + speed 1/min : > 250
rated speed pill . 225	T speed Militi . > 250
CRT mm min. :> 6.00	
	+ FUEL DELIVERY CHARACTERISTICS
Testing:	+
· ·	
Rated speed rpm : 325	+ Aneroid pressure
rack travel mm : 3.80 Tolerance mm : + 0.10	+ hPa : -
Tolerance mm : +- 0.10	+ Rated speed rpm : 700
	+ Del. quantity
Rated speed rpm : 375	+ cm3/1000 strokes : 269.0
	+ Tolerance
	+ cm3/1000 strokes : +- 1.0
TORQUE CONTROL	+ Check tolerance
Rated speed rpm : 700	+ cm3/1000s. : +- 4.0
rack travel mm : 11.30	+ Spreed
Tolerance mm : +- 0.05	+ Tolerance
	+ cm3/1000 strokes : 10.0
Rated speed rpm : 700	+ Check tolerance
rack travel mm : 10.45 Tolerance mm : + 0.05	+ cm3/1000s. : 14.0
Tolerance mm : +- 0.05	†
	Acceptation
ANEDOTO / ALTITUDE	Aneroid pressure
ANEROID/ALTITUDE	t hPa : -
COMPENSATOR TEST	Rated speed rpm : 700
	Del. quantity
CETTING	cm3/1000 strokes : 188.0
SETTING	+ Tolerance + cm3/1000 strokes : + 1.0
Rated speed rpm : 500	+ Check tolerance
	+ cm3/1000s. : +- 4.0
Pressure hPa : 1500 rack travel mm : 12.25	T 4.0
Tolerance mm : +- 0.25	\mathbf{I}
Over drive only . The U.C.	I
Rated speed rpm : 500	T STARTING FUEL DELIVERY
Pressure hPa : -	+ DIVINITION FOLE DELIVERY
rack travel mm : 7.80	Rated speed rpm : 100
Tolerance mm : +- 0.10	+ rack travel mm : 20.50
	1

Tolerance mm	: +	0.50
Del. quantity cm3/1000 strokes	•	155.0
Tolerance	•	.,,,,,
cm3/1000 strokes	: +-	15.0
Check tolerance		40.0
~m < / '!! !! !! !C	• -	10 N

1	OW	ID	· ~
L	UW	10	ᆫᆮ

Rated speed rpm	:	325	
Rack travel in mm Tolerance mm Del. quantity	: +	3.80 - 0.10	
cm3/1000 strokes	:	23.0	
cm3/1000 strokes	: +	- 3.0	
Check tolerance cm3/1000s. Spreed	: +-	- 6.0	
Tolerance cm3/1000 strokes Check tolerance	:	5.0	
cm3/1000s.	:	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.09.96 Test oil : ISO 4113

Combination No. : 0 403 244 056

Injection pump

Pump designation : PES4MW100/720RS1525

EP type number : 0 413 204 022

Governor

Governer design. : RQ300/1300MW160 Governer no. : 0 420 082 077

Cust. part No. : 0270749502

Customer-spec. information
Customer : MB-NFZ
Motor : CM364LA
Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 4.55
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm: 20.00 Tolerance mm: + 1.00

Firing order : 1- 3- 4- 2

Phasing : 0-9C-180-270
Tolerance : +-- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity cn3/1000 strokes : 119.0

Tolerance cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	<u> </u>
	+ GUIDE SLEEVE POSITION
Check tolerance	†
cm3/1000s. : 6.0	†
The time the state of the state	+ control lever
	position degree : VL
Rated speed rpm : 300	T control lever
	position degree : 109
Rack travel in mm: 3.90	Rated speed rpm : 800
Tolerance mm : +- 0.10	1
Del. quantity	+ Rack travel in mm : 16.50
cm3/1000 strokes : 12.0	+ Tolerance mm : +- 0.80
Tolerance	†
cm3/1000 strokes : +- 2.0 Check tolerance	FULL LOAD OF THEOV AT SHIP LOAD OTON
cm3/1000s. : +- 4.5	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	Rated speed rpm : 1300
Tolerance	Aneroid pressure
cm3/1000 strokes : 3.5	+ hPa : 1200
Check tolerance	+ Del. quantity
cm3/1000s. : 5.5	+ cm3/1000 strokes : 119.0
	Tolerance
(D) CETTING OF THEFETTON DUMP	+ cm3/1000 strokes : +- 1.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- Check tolerance
WITH GOVERNOR	+ cm3/1000s. : +- 3.0 + Spreed
	+ Tolerance
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : 3.5
	+ Check tolerance
Rated speed rpm : 1353	+ cm3/1000s. : 6.0
guide steeve	+
travel mm : 7.45	+
Tolerance mm : +- 0.15	CONTROL I FUED
Rated speed rpm : 300	CONTROL LEVER
Rated speed rpm : 300 guide sleeve	t control lever
travel mm : 1.74	position degree : 96.0
Tolerance mm : +- 0.20	tolerance degree : +- 4.0
	+
Rated speed rpm : 1300	RATED SPEED
guide sleeve	rack travel mm : 12.30
travel mm : 7.00	+ Rated speed rpm : 1345
Tolerance mm : + 0.10	Tolerance 1/min : +- 5
Rated speed rpm : 379	T monk through the control of the co
Rated speed rpm : 379 guide sleeve	+ rack travel mm : 4.00 + Rated speed rpm : 1445
travel mm : 3.45	Tolerance 1/min : +- 15
Tolerance mm : +- 0.10	- Total and Triming
	rack travel mm : 0.50
Rated speed rpm : 790	Tolerance mm : + 0.50
guide sleeve	Rated speed rpm : 1575
travel mm : 7.00	t
Tolerance mm : ← 0.10	†
Rated speed rpm : 1540	İ
Rated speed rpm : 1540 guide sleeve	LOW IDLE
travel mm : 11.50	TOM TOTE
Tolerance mm : + 0.50	+
	•

control lever position degree tolerance degree Setting point w/c	: +- 4.0 out bumper spring	Check speed 1/min : > 80 Check speed 1/min : < 260
Raced speed (pill		+ FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 5.50	Anna de la companya d
Testing:		+ Aneroid pressure - hPa : 1200
	700	Rated speed rpm : 750
Rated speed rpm rack travel mm	• 3.90	+ Del. quantity + cm3/1000 strokes : 117.0
Tolerance mm	: + 0.10	Tolerance
		cm3/1000 strokes : +- 1.5
TORQUE CONTROL		
Rated speed rpm		+ Spreed
rack travel mm Tolerance mm	: 13.30 : +- 0.05	+ Tolerance
roterance mm	: +- 0.05	+ cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 13.30	cm3/1000s. : 9.0
		Aneroid pressure
ANEROID/ALTITUDE		Rated speed rpm : 500
COMPENSATOR TEST		Del. quantity
		+ cm3/1000 strokes : 66.0 + Tolerance
SETTING		+ cm3/1000 strokes : +- 1.0
Rated speed rpm	: 500	+ Check tolerance + cm3/1000S. : +- 3.0
Pressure hPa	: 1200	+ cm3/1000s. : + 3.0
rack travel mm	: 13.30	
Tolerance mm	: +- 0.05	REDUCED QUANTITY
Rated speed rpm	: 500	Aneroid pressure
Pressure hPa Tolerance mm	: - 0.10	† hPa : 1200
roterance min	. += 0.10	Rated speed rpm : 1300 Del. quantity
MEASUREMENT		+ cm3/1000 strokes : 105.0
Rated speed rpm	: 500	+ Tolerance + cm3/1000 strokes : +- 1.5
Naced Speed (pill	. 200	+ Check tolerance
Pressure hPa	: 450	cm3/1000s. : +- 3.0
rack travel mm Tolerance mm	: 2.30 : +- 0.10	
TOTAL GIRES		T STARTING FUEL DELIVERY
Pressure hPa	: 250	Poted and and
rack travel mm Tolerance mm	: 0.50 : +- 0.10	+ Rated speed rpm : 100 + Del. quantity
		+ cm3/1000 strokes : 150.0
Start interlock		
State Hitertock		cm3/1000 strokes : +- 5.0 Check tolerance
Rated speed rpm Rated speed rpm	: > 100 : < 220	cm3/1000s. : +- 8.0

Rated speed rpm	:	300	
Rack travel in mm Tolerance mm Del. quantity	: +-	3.90 0.10	
7/4000	:	12.0	
cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	4.5	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	3.5	
cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.09.96 : ISO 4113 Test oil

Combination No. : 0 401 876 754

Injection pump

Pump designation : PE6P110B320RS3152 EP type number : 0 411 816 799

Governor

Governer design. : RSV200...1100P1A659

Governer no. : 0 421 833 577

Cust. part No. : 3826523-P01 v.08.96

Customer-spec. information

Customer : VOLVO-PENTA

: TD100G Motor Power KW : 203.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 : +- 1.5 bar Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.55 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.20 Tolerance mm : +-0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance "NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.70 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 173.0

Tolerance	+ Tolerance
cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	
CIID/10005 4.0	+ Spreed
	+ Tolerance
Spreed	+ cm3/1000 strokes : 4.0
	+ Check tolerance
Tolerance	+ cm3/1000s. : 7.5
cm3/1000 strokes : 4.0	+
	+
Check tolerance	
cm3/1000s, : 7.5	+ CONTROL LEVER
	+ control lever
	position degree : 60.0
Rated speed rpm : 200	tolerance degree : + 4.0
Marca speed rpm . 200	T coterance degree : +- 4.0
Prok though in my	T combact to the
Rack travel in mm: 4.00	+ control lever
Tolerance mm : +- 0.10	position degree : 112.0
Del. quantity	tolerance degree : +- 4.0
cm3/1000 strokes : 21.0	+
Tolerance	+ RATED SPEED
cm3/1000 strokes : +- 2.0	+ rack travel mm : 11.70
Check tolerance	+ Rated speed rpm : 1130
cm3/1000s. : + 4.5	+ Tolerance 1/min : +- 5
Spreed	
Tolerance	+ rack travel mm : 4.00
cm3/1000 strokes : 4.5	+ Rated speed rpm : 1185
Check tolerance	
	† Tolerance 1/min : + 15
cm3/1000s. : 7.5	†
	+ rack travel mm : 0.85
	+ Tolerance mm : + 0.55
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1300
WITH GOVERNOR	+
	+
	<u> </u>
GUIDE SLEEVE POSITION	LOW IDLE
	+
	†
control lever	+ control lever
position degree : - 3 Rated speed rpm : 800	+ position degree : 76.0
Rated speed rpm : 800	+ tolerance degree : +- 4.0
	+
Rack travel in mm : 0.50	+ control lever
Tolerance mm : +- 0.20	+ position degree : 24.0
The state of the s	tolerance degree : +- 4.0
governor spring	1 total and degree 4.0
pre-tension	I Cotting point which human anning
•	Setting point w/out bumper spring
click setting x : 5.00	1 24
	Rated speed rpm : 200
	rack travel mm : 3.50
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance mm : ← 0.10
	+
Rated speed rpm : 700	+ Testing:
Aneroid pressure	+
hPa : 1000	Rated speed rpm : 200
Del. quantity	track travel mm · 4 00
cm3/1000 strokes : 173.0	rack travel mm : 4.00 Tolerance mm : +- 0.10
0.C11 : 65AO 136 0001 /Clin	T roterance mm : TT U.IU

rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 260 : + 30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.70 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1000 : 12.70 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.20 : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure h?a rack travel mm Tolerance mm	: 220 : 10.50 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 580 : 12.45 : +- 0.05
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm	: - : 700
Del. quantity cm3/1000 strokes	: 126.0
Tolerance cm3/1000 strokes Check tolerance	: +- 1.5
cm3/1000s.	: +- 4.0

rack travel mm	:		20.50
Tolerance mm	:	+-	0.50
Del. quantity			
cm3/1000 strokes	:		175.0
Tolerance			
cm3/1000 strokes	:	+-	15.0
Check tolerance			
cm3/1000s.	:	+-	19.0

: 200
: 4.00 : +- 0.10
: 21.0
: +- 2.0
: +- 4.5
: 4.5
: 7.5

End of test specification sheet

Rated speed rpm : 100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 05.09.96 : ISO 4113

Combination No. : 0 401 876 755

Injection pump

Pump designation : PE6P120B320RS3187 EP type number : 0 411 826 818

Governor

Governer design. : RSV250...1100P1A653

Governer no. : 0 421 833 571

Cust. part No. : 3826534

: -P01 v. 08.96

Customer-spec. information

Customer : VOLVO-PENTA

Motor

: TD121G

Power KW : 256.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C

: +- 2.0 Tolerance °C

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.45 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.20 Tolerance mm : +-0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 9-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.50

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 210.5

G18

Tolerance	+ Tolerance
cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : + 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	+ Spreed
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+ Tolerance
Spreed	+ cm3/1000 strokes : 5.0
opi cea	Check tolerance
Tolerance	
cm3/1000 strokes : 5.0	+ cm3/1000s. : 9.0
CHIST TUDU STrokes: 5.0	Ť
Charles to Lancing	Ť
Check tolerance	CONTROL LEGEN
cm3/1000s. : 9.0	+ CONTROL LEVER
	†
	+ control lever
	+ position degree : 60.0
Rated speed rpm : 200	+ tolerance degree : +- 4.0
	+
Rack travel in mm : 4.00	+ control lever
Tolerance mm : +- 0.10	+ position degree : 112.0
Del. quantity	tolerance degree : + 4.0
cm3/1000 strokes : 27.0	+
Tolerance	+ RATED SPEED
cm3/1000 strokes : +- 2.5	+ rack travel mm : 11.50
Check tolerance	+ Rated speed rpm : 1130
cm3/1000s. : +- 5.0	+ Tolerance 1/min : +- 5
Spreed	Total ance minit . +-)
Tolerance	T mosk though an a / 00
cm3/1000 strokes : 5.0	rack travel mm : 4.00
	+ Rated speed rpm : 1185
Check tolerance	† Tolerance 1/min : +- 15
cm3/1000s. : 8.0	†
	+ rack travel mm : 0.85
	+ Tolerance mm : + 0.55
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1300
WITH GOVERNOR	Ī
GUIDE SLEEVE POSITION	LOW IDLE
	+
control lever	+ control lever
position degree : - 3	+ position degree : 76.0
Rated speed rpm : 800	tolerance degree : +- 4.0
	+
Rack travel in mm : 0.50	+ control lever
Tolerance mm : + 0.20	+ position degree : 24.0
	+ tolerance degree : + 4.0
governor spring	+
pre-tension	Setting point w/out bumper spring
click setting x : 5.00	The state of the s
Trian Certified in the Control	Rated speed rpm : 200
SHELL LOAD DELTHERY AT SHELL LOAD STOP	
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.10
700	†
Rated speed rpm : 700	+ Testing:
Aneroid pressure	+
hPa : 1200	+ Rated speed rpm : 200
Del. quantity	+ rack travel mm : 4.00
cm3/1000 strokes : 210.5	rack travel mm : 4.00 Tolerance mm : + 0.10
	· · · · · · · · · · · · · · · · · · ·

rack travel mm Rated speed rpm Tolerance 1/min	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.50 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 12.50 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 11.20 : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 530 : 11.50 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 760 : 12.25 : ← 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	700
Del. quantity cm3/1000 strokes	: 178.5
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0

rack travel mm Tolerance mm	: 20.50 : +- 0.50
Del. quantity cm3/1000 strokes Tolerance	: 265.0
cm3/1000 strokes Check tolerance	: +- 15.0
cm3/1000s.	: +- 19.0
LOW IDLE	
Date of managed managed	. 200

COM TOCK			
Rated speed rpm	:		200
Rack travel in mm Tolerance mm Del. quantity		+-	4.00 0.10
cm3/1000 strokes	:		27.0
cm3/1000 strokes Check tolerance	:	+-	2.5
cm3/1000s. Spreed	:	+-	5.0
Tolerance cm3/1000 strokes Check tolerance	•		5.0
cm3/1000s.	:		8.0

End of test specification sheet

Rated speed rpm : 100

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 05.09.96 Test cil : ISO 4113

Combination No. : 0 402 648 786

Injection pump

Pump designation : PE8P120A320LS7900 EP type number : 0 412 628 917

Governor

Governer design. : RQV350...1050PA1309

Governer no. : 0 421 814 182

Cust. part No. : 0270742802

Customer-spec. information Customer : MB-NFZ Motor : OM442 LA Power KW : 320.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 077

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 90 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25
Tolerance mm : ← 0.05
Check
tolerance mm : ← 0.10

Rack travel in mm : 20.50

Tolerance mm : +- 0.50

Firing order : 8-7-2-6-3 :-5-4-1

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 14.25 Tolerance mm: +- 0.05

1	guide sleeve
Del. quantity cm3/1000 strokes : 239.0	travel mm : 13.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : + 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : + 4.0	control lever position degree : - 1
Spreed	Rated speed rpm : 1215
Tolerance cm3/1000 strokes : 6.0	Rack travel in mm : 12.90 Tolerance mm : +- 1.30
Check tolerance cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
	Rated speed rpm : 600 Aneroid pressure
Rated speed rpm : 350	hPa : 1000 Del. quantity
Rack travel in mm: 5.60 Tolerance mm: + 0.10	cm3/1000 strokes : 239.0 Tolerance
Del. quantity cm3/1000 strokes : 19.0	cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : + 3.0	cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : + 6.0	Tolerance cm3/1000 strokes : 6.0
Spreed Tolerance	Check tolerance cm3/1000s. : 9.0
cm3/1000 strokes : 8.0 theck tolerance	
cm3/1000s. : 12.0	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 102.0
CUIDE CLEENE TONIC	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1098 guide sleeve	RATED SPEED rack travel mm : 12.90 Rated speed rpm : 1085 Tolerance 1/min : +- 5
travel mm : 9.44 Tolerance mm : +- 0.15	rack travel mm : 4.00
Rated speed rpm : 350	Rated speed rpm : 1170 Tolerance 1/min : + 15
guide sleeve travel mm : 1.18	rack travel mm : 0.50
Tolerance mm : + 0.20	Tolerance mm : +- 0.50 Rated speed rpm : 1300
Rated speed rpm : 500 + guide sleeve	·
travel mm : 2.69 Tolerance mm : + 0.25	
Rated speed rpm : 1320	LOW IDLE

control lever position degree	• 67.0	FUEL DELIVERY CHA	DACTEDICTIC
colerance degree		T FOEL DELIVERY CHA	KACTEKISTIC
Setting point w/o	ut bumper spring	Aneroid pressure	. 4000
Rated speed rpm	: 250	hPa Rated speed rpm	: 1000 : 1050
CRT mm min.	: > 9.20	+ Del. quantity - cm3/1000 strokes	: 224.0
esting:		Tolerance cm3/1000 strokes	: +- 3.0
ated speed rpm		theck tolerance cm3/1000s.	: +- 6.0
ack travel mm olarance mm		+ Spreed + Tolerance	
ated speed rpm	: 400	cm3/1000 strokes Check tolerance	: 8.0
		cm3/1000s.	: 12.0
ORQUE CONTROL	: 600	Aneroid pressure	
ack travel mm	: 14.25	+ hPa	: -
olerance mm	: + 0.05	Rated speed rpm Del. quantity	: 500
ated speed rpm	: 1050	+ cm3/1000 strokes	: 143.0
ack travel mm Olerance mm	: 14.05 : + 0.10	Tolerance cm3/1000 strokes	: +- 1.0
		+ Check tolerance	
NEROID/ALTITUDE		+ cm3/1000s. + Spreed	: +- 4.0
OMPENSATOR TEST		Tolerance	
		+ cm3/1000 strokes Check tolerance	: 8.0
ETTING		cm3/1000s.	: 12.0
ated speed rpm Pressure hPa	500	REDUCED QUANTITY	
	•	+	
EASUREMENT		+ Aneroid pressure + hPa	: 1000
ressure hPa	: 250_	Rated speed rpm	
ack travel mm olerance mm	: 0.35 : +- 0.05	+ Del. quantity + cm3/1000 strokes	: 168.0
		+ Tolerance	
ressure hPa	: 600	cm3/1000 strokes	: +- 2.0
ack travel mm olerance mm	: 2.25 : +- 0.15	Check tolerance cm3/1000s.	: +- 5.0
tart interlock	-	STARTING FUEL DEL	IVERY
ated speed rpm	: > 100	Rated speed rpm	: 100
ated speed rpm	: < 270	Del. quantity cm3/1000 strokes	: 250.0
heck	: > 80	+ Tolerance	
peed 1/min heck	: > 80	cm3/1000 strokes Check tolerance	: + 10.0
peed 1/min	: < 290	+ cm3/1000s.	: +- 14.0

Rated speed rpm	:	350	
Rack travel in mm Tolerance mm Del. quantity		5.60 0.10	
cm3/1000 strokes Tolerance	:	19.0	
cm3/1000 strokes Check tolerance	: +-	3.0	
cm3/1000s. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes Check tolerance	•	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.08.96 : ISO 4113

Combination No. : 0 402 676 830

Injection pump

Pump designation : PE6P120A320L37894 EP type number : 0 412 626 954

Governor

Governer design. : RSV600...1050P0A642

Governer no. : 0 421 833 556

Cust. part No. : 0270746002

Customer-spec. information Customer : MB-NFZ Motor : 0M 441 LA Power KW : 285.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 077

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. l/h : 105 Tolerance l/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.75 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-45-120-165-240

: -285

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 1075

	+
Rack travel in mm : 13.70 Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 251.0	Rated speed rpm : 1075 Aneroid pressure
Tolerance cm3/1000 strokes : + 1.0	+ hPa : - Del. quantity + cm3/1000 strokes : 251.0
Check tolerance cm3/1000s. : +- 4.0	+ Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance
Spreed	+ cm3/1000S. : +- 4.0 + Spreed + Tolerance
Tolerance cm3/1000 strokes : 6.0	cm3/1000 strokes : 6.0 Check tolerance
Check tolerance cm3/1000s. : 9.0	+ cm3/1000s. : 9.0
	CONTROL LEVER
Rated speed rpm : 600	control lever position degree : 83.0
Rack travel in mm : 4.10 Tolerance mm : + 0.10 Del. quantity	tolerance degree : + 4.0
cm3/1000 strokes : 17.0 Tolerance	+ RATED SPEED + rack travel mm : 12.70 + Rated speed rpm : 1115
cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0	Tolerance 1/min : +- 5 Check
cm3/1000s. : +- 6.0 Spreed Tolerance	+ speed 1/min : +- 10 +
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	LOW IDLE
cm3/1000S. : 12.0	+ LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 68.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
	Rated speed rpm : 100
control lever position degree : - 3 Rated speed rpm : 800	CRT mm min. : > 19.50 Testing:
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Rated speed rpm : 600 rack travel mm : 4.10 Tolerance mm : +- 0.10
governor spring pre-tension click setting x : 4.00	rack travel mm : 2.00 Rated speed rpm : 630 Tolerance 1/min : +- 30

SET IDLE AUXILIARY SPRING

rack travel mm : 2.00

TORQUE CONTROL

Rated speed rpm : 1075
rack travel mm : 13.70
Tolerance mm : +- 0.05

Rated speed rpm : 800 rack travel mm : 14.75 Tolerance mm : + 0.10

Rated speed rpm : 1000 rack travel mm : 14.35 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 291.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : +- 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 270.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 600

Rack travel in mm: 4.10 Tolerance mm: + 0.10

Del. quantity

cm3/1000 strokes : 17.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 11.09.96 : ISO 4113

Combination No. : 0 402 676 835

Injection pump

Pump designation : PE6P12OA32ORS7428 EP type number : 0 412 626 959

Governor

Governer design. : RSV300...850P1A594

: -2

Governer no.

: 0 421 833 479

Cust. part No. : 11031996 P01 v.08.96

Customer-spec. information

Customer : VCE

Motor

: TD 122 KKE

Power KW

: 237.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 2 417 413 078

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : - 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 9.40 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 253.0	Rated speed rpm : 700 Aneroid pressure hPa : 1500
Tolerance cm3/1000 strokes : +- 1.0	Del. quantity cm3/1000 strokes : 253.0 Tolerance
Check tolerance cm3/1000s. : + 4.0	<pre>cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0</pre>
Spreed	Spre⊕d Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : 8.0	Check tolerance cm3/1000s. : 11.0
Check tolerance cm3/1000S. : 11.0	
	CONTROL LEVER
Rated speed rpm : 330	<pre>control lever position degree : 50.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 3.90 Tolerance mm: + 0.10	control lever
Del. quantity cm3/1000 strokes : 45.0 Tolerance	position degree : 100.0 tolerance degree : +- 4.0
cm3/1000 strokes : +- 3.0 +- Check tolerance	RATED SPEED rack travel mm : 8.40
cm3/1000s. : +- 6.0 +- 5preed	Rated speed rpm : 870 Tolerance 1/min : +- 5
Tolerance + cm3/1000 strokes : 5.0 + Check tolerance +	rack travel mm : 4.00 Rated speed rpm : 905
cm3/1000s. : 8.0	Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.80 Tolerance mm : +- 0.50 Rated speed rpm : 1070
GUIDE SLEEVE POSITION +	LOW IDLE
control lever	and all tone
position degree : -3 + Rated speed rpm : 800 +	<pre>control lever position degree : 75.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 0.50 + Tolerance mm: + 0.20	control lever
governor spring + pre-tension +	position degree : 25.0 tolerance degree : +- 4.0
click setting x : 6.00	Setting point w/out bumper spring
'	

: 330 : 3.40	Del. quantity	
: + 0.10		: 247.0
	+ cm3/1000 strokes	
: 3.90	cm3/1000s. Spreed	
		: 10.0
: 420	Check tolerance cm3/1000s.	: 14.0
	Ţ	
**************************************	+ hPa	; -
	Rated speed rpm	: 700
	+ cm3/1000 strokes	: 192.0
: 700	cm3/1000 strokes	
: 9.20 : +- 0.10		: +- 4.0
0.10	10000	4.0
	STARTING FUEL DE	LIVERY
		: 100
	+ Del. quantity	
: 1500 • • • • • • •		: 145.0
: +- 0.05	+ cm3/1000 strokes	: +- 15.0
• 500		: + 19.0
: -	T CIII37 18003.	: 17.0
: 7.40 : + 0.10	+	
	LOW IDLE	
: 500	Rated speed rpm	: 330
: 550	Rack travel in m	n: 3.90
	+ Tolerance mm	
: ← 0.20	Del. quantity	
: 260		: 45.0
: 0.25	+ cm3/1000 strokes	: +- 3.0
: +- 0.05	Check tolerance	
	+ cm3/1000s.	: +- 6.0
	+ Spreed	
DACTEDYOTTOO	Tolerance	
RACTERISTICS	Tolerance cm3/1000 strokes	: 5.0
RACTERISTICS	Tolerance	: 5.0
	: 3.40 : + 0.10 : 330 : 3.90 : + 0.10 : 2.00 : 420 : + 30 : 700 : 9.40 : + 0.05 : 700 : 9.20 : + 0.10 : 500 : 1500 : 9.40 : + 0.10 : 1500 : 1500 : 1500 : 1500 : 1500 : 1500 : 1500 : 2.40 : 2.00 : 2.00 : 3.40 : 1500 : 1500 : 1500 : 1500 : 1500 : 2.40 : 2.00 : 2.00 : 3.40 : 3.40 : 4.00 : 500 : 1500 : 1500 : 1500 : 1500 : 2.40 : 2.40 : 2.40 : 3.40 : 4.40 : 500 : 500 : 500 : 7.40 : 7.4	### 1.3.40

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 24.06.96 : ISO 4113

Combination No. : 0 402 748 812

Injection pump

Pump designation : PES8P120A720LS7425 EP type number : 0 412 728 814

Governor

Governer design. : RQV350...1200PA1310K

Governer no. : 0 421 815 541

Cust. part No. : CCEP 5164 66-136

Customer-spec. information

Customer : RENAULT V.I.

Motor

: MACK E9-750

Power KW

: 552.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

Tolerance bar

: 208.5

: +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

H₀4

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 3.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.00

Tolerance mm : \leftarrow 0.50

Firing order : 1-2-7-8-4

: - 5- 6- 3

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance 'NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : 4.20 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21,00

and maximum rack

travel

19.50

Difference ° CS :

3.90

CRT ZERO POSITION

	† Tolerance mm : +- 0.20
Rack travel in mm : 13.30 Tolerance mm : +- 0.05	Rated speed rpm : 833 guide sleeve
	travel mm : 5.90
BASIC SETTING	Tolerance mm : +- 0.25
	Rated speed rpm : 480
Rated speed rpm : 1200	guide sleeve : 3.27
Del. quantity cm3/1000 strokes : 305.0	Tolerance mm : + 0.25 Rated speed rpm : 1570
Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 13.50
Check tolerance	Tolerance mm : +- 0.50
cm3/1000s. : + 4.0	
Spreed	_
₹ 1	†
Tolerance cm3/1000 strokes : 4.0	control lever
ciiis/ todo strokes . 4.0	position degree : - 1 Rated speed rpm : 1408
Check tolerance	Traced speed 15.11 . 1400
cm3/1000s. : 8.0	Rack travel in mm : 12.30
	_
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : -6.30	+ Rated speed rpm : 1200
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1200
cm3/1000 strokes : 53.0 Tolerance	+ Del. quantity + cm3/1000 strokes : 305.0
cm3/1000 strokes : +- 2.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : + 6.0	- Check tolerance
Spreed	+ cm3/1090s. : +- 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 8.0 Check tolerance	Tolerance cm3/1000 strokes : 4.0
cm3/1000s. : 12.0	+ Check tolerance
	cm3/1000s. : 8.0
(B) SETTING OF INJECTION PUMP	‡
WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
GOIDE SECEVE MAVEE	position degree : 117.0
Rated speed rpm : 1255	tolerance degree : + 4.0
guide sleeve	+
travel mm : 9.50	+ RATED SPEED
Tolerance mm : +- 0.15	+ rack travel mm : -1.00
Rated speed rpm : 350	+ Rated speed rpm : 1250 + Tolerance 1/min : +- 5
guide sleeve	Total direction in the second
travel mm : 1.90	rack travel mm : -9.30

Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm	: +- 15 : -12.75 : +- 0.55
LOW IDLE	
control lever position degree tolerance degree	: 73.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : -6.30 : +- 0.10
Rated speed rpm	: 225
CRT mm max.	: < -4.20
Rated speed rpm	: 350
TORQUE CONTROL Rated speed rpm	: 1200
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 600 : -1.60 : + 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa Tolerance mm	: 1200 : 1200 : + 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : -3.30 : +- 0.20
MEASUREMENT	
MEASOREMENT	

Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 640 : -2.60 : +- 0.20 : 950 : -0.75 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 120 : < 230
Check speed 1/min Check speed 1/min	: > 100 : < 250
FUEL DELIVERY CHA	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 188.5 : + 1.0 : + 4.0
STARTING FUEL DEL: Rated speed rpm rack travel mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 21.00 : 460.0

Rated speed rpm	:	325	
Rack travel in mm Tolerance mm Del. quantity	: +	-6.30 0.10	
cm3/1000 strokes	:	53.0	
Tolerance			
cm3/1000 strokes	: +-	2.0	
Check tolerance			
cm3/1000s.	: +-	6.0	
Spreed			
Tolerance			
cm3/1000 strokes	:	8.0	
Check tolerance			
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 09.09.96 : ISO 4113

Test oil

Combination No. : 0 402 846 076

Injection pump

Pump designation : PE6P12OA32ORS8043 EP type number : 0 412 862 035

Governor

Governer design. : RQV300...1100PA1248

Governer no.

: 0 421 814 165

Cust. part No. : 11031330

: -P01 v.08.96

Customer-spec. information

Customer : VCE

: TD 103 KBE Motor : 216.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00

Tolerance mm : + · 1.00

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.00

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 270.0

	+ Rated speed rpm : 1370
Tolerance	+ guide sleeve
cm3/1000 strokes : +- 1.0	† travel mm : 11.50
	+ Tolerance mm : +- 0.50
Check tolerance	+
cm3/1000s. : +- 4.0	
	+ GUIDE SLEEVE POSITION
Spreed	†
- 1	†
Tolerance	t control lever
cm3/1000 strokes : 8.0	position degree : - 1
Charles Astronomy	Rated speed rpm : 1249
Check tolerance cm3/1000s. : 11.0	Dock travel in an 40 00
CIID/10005. : 11.0	Rack travel in mm : 10.00
49 hayana ayan 19 40 mayar	
	I
Rated speed rpm : 330	FULL LOAD DELIVERY AT FULL LOAD STOP
Matsa speed (pill) (556	TOLL COAD DELIVERY AT TOLL COAD STOT
Rack travel in mm: 4.20	+ Rated speed rpm : 700
Tolerance mm : $+$ 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 29.0	Del. quantity
Tolerance	+ cm3/1000 strokes : 270.0
cm3/1000 strokes : +- 2.5	+ Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 5.0	+ Check tolerance
Spreed	+ cm3/1000s. : +- 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 5.0	† Tolerance
Check tolerance	+ cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	+ Check tolerance
	+ cm3/1000s. : 11.0
	†
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	CONTROL LEVER
	T CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
	position degree : 60.0
Rated speed rpm : 1140	tolerance degree : +- 4.0
guide sleeve	-
travel mm : 7.71	↓ control lever
Tolerance mm : +- 0.15	position degree : 114.0
	+ tolerance degree : +- 4.0
Rated speed rpm : 330	+
guide sleeve	+ RATED SPEED
travel mm : 2.10	+ rack travel mm : 10.00
Tolerance mm : \leftarrow 0.20	+ Rated speed rpm : 1130
	+ Tolerance 1/min : +- 5
Rated speed rpm : 1080	†
guide sleeve	rack travel mm : 4.00
travel mm : 6.80	Rated speed rpm : 1195
Tolerance mm : +- 0.25	Tolerance 1/min : + 15
Rated speed rpm : 520	t mark thought am a 0.50
Rated speed rpm : 520 guide sleeve	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
travel mm : 4.67	Rated speed rpm : 1275
Tolerance mm : + 0.25	T Nated Speed (pill . 12/)
Total differential . — U.25	Ţ

control lever

position degree : 68.0 tolerance degree : + 4.0

control lever

position degree : 14.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 230

CRT mm min. :> 7.00

Testing:

Rated speed rpm : 330 rack travel mm : 4.20 : +- 0.10 Tolerance mm

Rated speed rpm : 400

TORQUE CONTROL
Rated speed rpm : 700
11.00 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 11.00 Tolerance mm : +- 0.05

500 Rated speed rpm Pressure hPa 3.60 rack travel mm : : +- 0.10 Tolerance mm

MEASUREMENT

Rated speed rpm : 500

550 Pressure hPa : rack travel mm : 2.10 : +- 0.20 Tolerance mm

Pressure hPa 230 rack travel mm : 0.25 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 202.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

LOW IDLE

Rated speed rpm : 330

Rack travel in mm : 4.20 Tolerance mm : +- 0.10 Del. quantity

cm3/1000 strokes : 29.0

Tolerance

cm3/1000 strokes : +- 2.5

Check tolerance

cm3/1000s. 5.0 : +-Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. 8.0

End of test specification sheet

H10

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition Test oil

: 09.09.96 : ISO 4113

Combination No. : 0 402 846 077

Injection pump

Pump designation : PE6P120A320RS8043 EP type number : 0 412 826 035

Governor

Governer design. : RQV300...1050PA1247

Governer no. : 0 421 814 163

Cust. part No. : 11031331-P01v.08.96

Customer-spec. information

Customer : VCE

Motor Power KW : TO 103 KCE

: 189.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Overflow quantity

min. l/h

: 165

Tolerance l/h

: +- 10.0

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

1.5

H11

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm :

600

REMARKS

(A) INJECTION FUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.25

Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: +- 0.05

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : + 0.75

Start of delivery mark

Barrel no.

BASIC SETTING

Rated speed rpm :

500

Rack travel in mm : 11.80

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 318.0	+ Tolerance mm : +- 0.25
Tolerance	Rated speed rpm : 1400 guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 11.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 4.0	
Spreed	+ GUIDE SLEEVE POSITION
Talaman	†
Tolerance	+ control lever
cm3/1000 strokes : 8.0	+ position degree : -1
	+ Rated speed rpm : 1259
Check tolerance	+
cm3/1000s. : 11.0	+ Rack travel in mm : 9.80
	+ Tolerance mm : +- 1.30
	+
Rated speed rpm : 320	FULL LOAD DELIVERY AT FULL LOAD STOP
in and a minimum of the second	1 SEE COND DECIVER AT TOLL COND STOP
Rack travel in mm: 5.20	Rated speed rpm : 500
Tolerance mm : + C.10	+ Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 50.0	
Tolerance	Del. quantity
cm3/1000 strokes : +- 2.5	+ cm3/1000 strokes : 318.0
Check tolerance	Tolerance
	+ cm3/1000 strokes : + 1.0
	Check tolerance
Spreed	+ cm3/1000s. : + 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 5.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	+ Check tolerance
	+ cm3/1000s. : 11.0
	+
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	
	+ CONTROL LEVER
	+
GUIDE SLEEVE TRAVEL	+ control lever
	+ position degree : 45.0
Rated speed rpm : 1102	+ tolerance degree : +- 4.0
guide sleeve	+
travel mm : 7.80	+ control lever
Tolerance mm : +- 0.15	+ position degree : 111.0
	+ tolerance degree : +- 4.0
Rated speed rpm : 320	+
guide sleeve	+ RATED SPEED
travel mm : 1.34	+ rack travel mm : 9.60
Tolerance mm : + 0.20	+ Rated speed rpm : 1090
	+ Tolerance 1/min : + 5
Rated speed rpm : 802	+
guide sleeve	rack travel mm : 4.00
travel mm : 5.18	+ Rated speed rpm : 1170
Tolerance mm : +- 0.25	+ Tolerance 1/min : +- 15
	+
Rated speed rpm : 530	+ rack travel mm : 0.50
guide steeve	+ Tolerance mm : + 0.50
tracel mm : 3.11	+ Rated speed rpm : 1250
	· · · · · · · · · · · · · · · · · · ·

LOW IDLE	
control lever position degree tolerance degree	: 84.0 : +- 4.0
control lever position degree tolerance degree	: 18.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 220
CRT mm min.	; > 8.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 320 : 5.20 : + 0.10
Rated speed rpm	: 380
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.80 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 10.60 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 720 : 10.90 : + 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 11.80 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 8.70 : + 0.10

MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 900 : 2.80 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 230 : 0.25 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 1050
cm3/1000 strokes Tolerance	: 218.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm	: 320
Rack travel in mm Tolerance mm	: 5.20 : +- 0.10
Del. quantity cm3/1000 strokes	: 50.0
Tolerance cm3/1000 strokes	: +- 2.5
Check tolerance cm3/1000s.	: + 5.0
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 5.0
cm3/1000s.	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.09.96 Test oil : ISO 4113

Combination No. : 0 402 846 078

Injection pump

Pump designation : PE6P12OA32ORS8044 EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050PA1225 Governer no. : 0 421 814 151

Cust. part No. : 11031993

: -P01 v.08/96

Customer-spec. information Customer : VCE

Motor : TD122KAE Power KW : 245.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 138 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.50 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : + 0.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 9.30

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	. 274 0	Tolerance mm : +- 0.25
Tolerance		Rated speed rpm : 1310
	- 4.0	guide sleeve
cm3/1000 strokes	1.0	travel mm : 11.50
		Tolerance mm : +- 0.50
Check tolerance	-	
cm3/1000s.	: +- 4.0 -	
		GUIDE SLEEVE POSITION
Spreed	4	
	-	
Tolerance	-	control lever
cm3/1000 strokes	8.0	position degree : - 1
		Rated speed rpm : 1201
Check tolerance		L Nated Speed (pill . 120)
cm3/1000s.	: 11.0	Rack travel in mm : 8.40
CIII 57 10005.	. 11.0	
		Tolerance mm : +- 1.30
	-	
Dadad assaultan	. 705	
Rated speed rpm	: 325 -	FULL LOAD DELIVERY AT FULL LOAD STOP
0 -1-1-1-1	3.65	
Rack travel in m		- Rated speed rpm : 700
Tolerance mm	: +- 0.10	- Aneroid pressure
Del. quantity	-	- hPa : 1500
cm3/1000 strokes	: 23.0	- Del. quantity
Tolerance	-	- cm3/1000 strokes : 236.0
cm3/1000 strokes	: +- 3.0	Tolerance
Check tolerance	-	cm3/1000 strokes : +- 1.0
cm3/1000s.	: +- 6.0	- Check tolerance
Spreed		- cm3/1000s. : +- 4.0
Tolerance		- Spreed
cm3/1000 strokes	: 5.0	- Tolerance
Check tolerance	. 5.0	
cm3/1000s.	: 8.0	
Cm3/10003.	: 8.0 -	Check tolerance
	7	cm3/1000s. : 11.0
(0) 05777110 05 7	***************************************	
(B) SETTING OF I	NJECTION PUMP	-
WITH GOVERNOR	7	
	-	CONTROL LEVER
GUIDE SLEEVE TRA	VEL -	control lever
	-	position degree : 62.0
Rated speed rpm	: 1130	tolerance degree : +- 4.0
guide sleeve	-	
travel mm	: 8.50	- control lever
Tolerance mm		position degree : 126.0
		tolerance degree : + 4.0
Rated speed rpm	: 325	
guide sleeve		- RATED SPEED
travel mm	: 2.03	rack travel mm : 8.30
Tolerance mm	+ 0.20	- Rated speed rpm : 1120
iotel alice (Bit	. 0.20	- Tolerance 1/min : +- 5
Rated speed non	: 1039	- roterance rought : The 3
Rated speed rpm	. 1037	mak traval m
guide sleeve	. 700	rack travel mm : 4.00
travel mm	: 7.00	Rated speed rpm : 1165
Tolerance mm	: +- 0.25	Tolerance 1/min : +- 15
Rated speed rpm	: 520	rack travel mm : 0.50
		- Tolerance mm : +- 0.50
guide sleeve	1	
guide sleeve travel mm	: 4.67	- Rated speed rpm : 1265

LOW IDLE	
control lever position degree tolerance degree	: 77.0 : + 4.0
control lever position degree tolerance degree	: 14.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 7.73
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.80 : ← 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 9.30 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 9.30 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 7.80 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500

Pressure hPa rack travel mm Tolerance mm	: 290 : 0.25 : +- 0.05		
FUEL DELIVERY CHA	RACTERISTICS		
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 700 : 188.0 : +- 1.0 : +- 4.0		
STARTING FUEL DELIVERY			
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 20.50 : + 0.50 : 155.0 : + 15.0 : + 19.0		
LOW IDLE			
Rated speed rpm	: 325		
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:		

End of test specification sheet

Pressure hPa : 520 rack travel mm : 1.30 Tolerance mm : + 0.20

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 11.09.96 Edition : ISO 4113 Test oil

Combination No. : 0 403 246 047

Injection pump

Pump designation : PES6MW100/720RS1522

EP type number : 0 413 206 023

Governor

Governer design. : RQV300...1300MW148

: -4

Governer no. : 0 420 083 325

Cust. part No. : 0250744802

Customer-spec. information

Customer : MB-NFZ Motor : 0M366LA Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

her 208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

: 4.55 : +- 0.05 Prestroke mm Tolerance mm Check

tolerance mm : +-0.10

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.30 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: +- 3.0

Spreed

Tolerance cm3/1000 strokes ; 4.5	+ Rated speed rpm : 1720
Check tolerance cm3/1000s. : 7.0	travel mm : 13.50 Tolerance mm : +- 0.50
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Rack travel in mm: 4.20 Tolerance mm: +- 0.10 Del. quantity cm3/1000 strokes: 12.0 Tolerance cm3/1000 strokes: +- 2.0 Check tolerance	t control lever position degree : 123 Rated speed rpm : 1500 Rack travel in mm : 10.00 Tolerance mm : +- 2.70
cm3/1000s. : +- 4.5 Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. : 4.0	Rated speed rpm : 1300 Aneroid pressure hPa : 1200
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- Del. quantity - cm3/1000 strokes : 118.0 - Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : 1355	- cm3/1000s. : +- 3.0 - Spreed - Tolerance - cm3/1000 strokes : 4.5
guide sleeve travel mm : 9.32 Tolerance mm : +- 0.25	Check tolerance cm3/1000s. : 7.0
Rated speed rpm : 300 guide sleeve travel mm : 0.92 Tolerance mm : + 0.25	CONTROL LEVER control lever
Rated speed rpm : 1078 guide sleeve	position degree : 120.0 tolerance degree : +- 4.0
travel mm : 7.06 Tolerance mm : +- 0.25 Rated speed rpm : 514	+ RATED SPEED + rack travel mm : 12.30 + Rated speed rpm : 1345 + Tolerance 1/min : +- 5
guide sleeve travel mm : 2.14 Tolerance mm : + 0.25	rack travel mm : 4.00 Rated speed rpm : 1485
Rated speed rpm : 564 guide sleeve travel mm : 2.60	Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : +- 0.50
Tolerance mm : + 0.25 Rated speed rpm : 740	Rated speed rpm : 1600
guide sleeve travel mm : 3.93 Tolerance mm : +- 0.25	LOW IDLE

H19

control lever position degree tolerance degree	: 74.0 : + 4.0
Setting point w/c	out bumper spring
Rated speed rpm	: 200
CRT mm min.	: > 5.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1300 : 13.30 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.30 : +- G.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.30 : +- 0.10
Rated speed rpm Pressure hPa Tolerance mm	: 500 : - : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 800 : 4.20 : +- 0.10
Pressure hPa rack travel mm Tolerance mm	: 300 : 1.20 : +- 0.10
Start interlock	
Rated speed rpm	: > 100

The second of th				
Check speed 1/min Check speed 1/min	: > 80 : < 220			
FUEL DELIVERY CHARACTERISTICS				
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/10CO strckes Tolerance cm3/100O strokes Check tolerance cm3/100OS. Soreed Tolerance	: 1200 : 750 . 113.0 : +- 1.5 : +- 4.0			
cm3/1000 strokes Check tolerance cm3/1000s.	: 6.0			
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strckes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 48.0 : +- 1.0 : +- 3.0			
STARTING FUEL DELIVERY				
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 150.0 : +- 5.0 : +- 8.0			
LOW IDLE Rated speed rpm	: 300			
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 4.20 : +- 0.10 : 12.0			

Rated speed rpm : < 200

Tolerance cm3/1000 strokes Check tolerance	; +-	2.0	
cm3/1000S. Spreed Tolerance	; +	4.5	
cm3/1000 strokes Check tolerance	•	2.0	
cm3/1000s.	:	4.0	

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 11.09.96 Test oil : ISO 4113

Combination No. : 0 403 246 050

Injection pump

Pump designation : PES6MW100/720RS1527

EP type number : 0 413 206 026

Governor

Governer design. : RQV300...1300MW132

: -16

Governer no. : 0 420 083 335

Cust. part No. : 0260749302

Customer-spec. information

Customer : MB-NFZ Motor : 0M366LA Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.30 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

GUIDE SLEEVE POSITION	Tolerance cm3/1000 strokes : 3.5	İ
Cm3/1000S. : 6.0 Rated speed rpm : 300 Rack travel in mm : 4.00 Florance mm : + 0.10 Bel, quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 118.0 Tolerance cm3/1000 strokes : 118.0 Tolerance cm3/1000 strokes : 118.0 Tolerance cm3/1000 strokes : 13.0 Spreed GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 6.70 Tolerance mm : + 0.15 Rated speed rpm : 1090 guide sleeve travel mm : 1.01 Tolerance mm : + 0.25 Rated speed rpm : 1356 guide sleeve travel mm : 4.70 Tolerance mm : + 0.25 Rated speed rpm : 1480 Tolerance mm : + 0.25 Rated speed rpm : 1683 guide sleeve travel mm : 2.97 Tolerance mm : + 0.25 Rated speed rpm : 1683 guide sleeve travel mm : 1.025 Rated speed rpm : 1780 guide sleeve travel mm : 1.025 Rated speed rpm : 1780 guide sleeve travel mm : 1.780		GUIDE SLEEVE POSITION
Control lever position degree VL		‡
Reted speed rpm : 300 Rack travel in mm : 4.00 Tolerance mm : + 0.10 Del. quantity condition degree : 125 Rated speed rpm : 1480 Tolerance mm : + 0.70 Tolerance cm3/1000 strokes : 12.0 Check tolerance cm3/1000s cm3/		control lever
Pack travel in mm : 4.00 Tolerance mm : + 0.10 Rated speed rpm : 1480 Tolerance mm : + 0.10 Rack travel in mm : 10.00 Tolerance mm : + 2.7		position degree : VL
Rated trevel in mm	Rated speed rpm : 300	t + control lever
Tolerance mm		position degree : 125
Del. quantity		+ Rated speed rpm : 1480
cm3/1000 strokes : 12.0 12.0 Tolerance vm3/1000 strokes : + 2.0 FULL LOAD DELIVERY AT FULL LOAD STOP Cm3/1000S. : + 4.5 Rated speed rpm : 1300 Spreed Tolerance cm3/1000 strokes : 3.5 Aneroid pressure hPa : 1300 Check tolerance cm3/1000S. : 5.5 Cm3/1000 strokes : 118.0 Cm3/1000S. : 5.5 Cm3/1000 strokes : 118.0 CM SETTING OF INJECTION PUMP WITH GOVERNOR Check tolerance cm3/1000 strokes : 4.0 CHOLDE SLEEVE TRAVEL Check tolerance cm3/1000S. : 4.0 Rated speed rpm : 1353 Guide sleeve travel mm : 4.015 CONTROL LEVER CONTROL LEVER CONTROL LEVER Control lever position degree : 117.0 Tolerance mm : + 0.20 Tolerance degree : 4.0 Rated speed rpm : 1090 RATED SPEED rack travel mm : 12.30 Rated speed rpm : 690 RATED SPEED rack travel mm : 12.45 Tolerance mm : + 0.25 Tolerance 1/min : + 5 Rated speed rpm : 1480 Tolerance 1/min : + 0.50 Rated speed rpm : 1683 Tolerance mm : + 0.50 Rated speed rpm : 1780 Tolerance mm : + 0.50 Rated speed rpm : 1780 Tolerance mm : + 0.50 Rated speed rpm : 1350 Tolerance mm : + 0.50		†
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Rated speed rpm : 1780 guide sleeve travel mm : 13.50 LOW IDLE		Ī
guide sleeve + LOW IDLE travel mm : 13.50 +	TO COLUMN TO COLUMN	
guide sleeve + LOW IDLE travel mm : 13.50 +	Rated speed rpm : 1780	
	guide sleeve	+ LOW IDLE
lolerance mm : +- U.5U +		†
	ioterance mm : +- U.5U	†

		+	
control lever	70.0	Rated speed rpm	
position degree tolerance degree	: /2.0 : +- 4.0	Rated speed rpm	: < 200
•		Check	
Setting point w/o	out bumper spring	+ speed 1/min + Check	: > 80
Rated speed rpm	: 200	speed 1/min	: < 220
CRT mm min.	: > 4.50	Ī	
Testing:		+ FUEL DELIVERY CHAR	ACTERISTICS
Rated speed rpm	: 300	Aneroid pressure	
rack travel mm	: 4.00	+ hPa	: 1000
rack travel mm Tolerance mm	: + 0.10	Rated speed rpm	
Rated speed rpm	· 490	+ Del. quantity + cm3/1000 strokes	. 117 0
rack travel mm	2 00	Tolerance	. 117.0
TOTAL CITATOR IN	. 2.00	cm3/1000 strokes	: +- 1.5
		- Check tolerance	
TORQUE CONTROL		+ cm3/1000s.	: +- 4.0
Rated speed rpm	: 1300	Spreed	
rack travel mm	: 13.30	+ Tolerance	
Tolerance mm	: +- 0.05	+ cm3/1000 strokes	: 6.0
.	400	+ Check tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 600	+ cm3/1000s.	: 9.0
rack travel mm	: 13.30	†	
lolerance mm	: +- 0.10		
		+ Aneroid pressure	_
ANEROID/ALTITUDE		- + hPa + Rated speed rpm	500
COMPENSATOR TEST		+ Del. quantity	: 500
COLLEGION (CO.		cm3/1000 strokes	• /8 0
		+ Tolerance	. 40.0
SETTING		+ cm3/1000 strokes	: +- 1.0
		+ Check tolerance	
Rated speed rpm	: 500	+ cm3/1000s.	: +- 3.0
Pressure hPa	: 1000	+	
rack travel mm	: 13.30	+	
Tolerance mm	: +- 0.05		
Detect appeal was	. 500	+ STARTING FUEL DELI	VERY
Rated speed rpm Pressure hPa		Rated speed rpm	: 100
Tolerance mm		Del. quantity	. 100
· Ott. di loc limit		+ cm3/1000 strokes	: 150.0
MEASUREMENT		+ Tolerance	,,,,,
		+ cm3/1000 strokes	: ← 5.0
Rated speed rpm	: 500	+ Check tolerance	
	* -	+ cm3/1000s.	: +- 8.0
Pressure hPa	: 500	†	
rack travel mm	3.15	†	
Tolerance mm	: +- 0.10	†	
Pressure hPa	: 300	LOW IDLE	
rack travel mm	: 1.00	I LOW TOLE	
Tolerance mm	: + 0.10	Rated speed rpm	: 300
. 3 101 (41190 1888		+ mateu speed i piii	. 550
		- + Rack travel in mm	
Start interlock		+ Tolerance mm	

Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
theck tolerance		
cm3/1000s.	:	5.5
cm3/1000S.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.09.96 : ISO 4113

Combination No. : 0 402 676 832

Injection pump

Pump designation : PE6P120A320LS7898 EP type number : 0 412 626 957

Governor

Governer design. : RSV350...1000P0A648

Governer no. : 0 421 833 565

Cust. part No. : 0270748202

Customer-spec. information Customer : MB-NFZ Motor : 0M441 A

Power KW

: 170.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 Tolerance bar : **←** 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 5.25 : +- 0.05 Prestroke mm Toterance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 6-3-5-2-4-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance "NW : + 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 11.75

H26

Tolerance mm : +- 0.05 +	Del. quantity
Del. quantity	cm3/1000 strokes : 172.0 Tolerance
cm3/1000 strokes : 172.0	cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : +- 4.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed	cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 101.0 tolerance degree : + 4.0
Rated speed rpm : 350	ASSEMBLY GOVERNOR SETTING
Rack travel in mm: 5.00 Tolerance mm: +- 0.10 Del. quantity	Rated speed rpm : 1030 rack travel mm : 10.70
cm3/1000 strokes : 19.0	Rated speed rpm : 1105 Tolerance 1/min : + 4
cm3/1000 strokes : +- 3.0 +- Check tolerance +-	rack travel mm : 4.00
cm3/1000s. : +- 6.0 + 5preed + Tolerance +-	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
cm3/1000 strokes : 6.0 + Check tolerance	
cm3/1000s. : 10.0	Rated speed rpm : 1031 rack travel mm : 10.70
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1106 Tolerance 1/min : + 4 rack travel mm : 4.00
GUIDE SLEEVE POSITION	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 1032 rack travel mm : 10.70
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Rated speed rpm : 1107 Tolerance 1/min : +- 4 rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85 Tolerance mm : + 0.55
Rated speed rpm : 980 Aneroid pressure	Rated speed rpm : 1300
hPa : 1000	Rated speed rpm : 1033

rack travel mm	: 10.70
Rated speed rpm	: 1108
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 1300
Dated speed apm	: 1034
Rated speed rpm rack travel mm	: 1034 : 10.70
Rated speed rpm	: 1109
Tolerance 1/min rack travel mm	: +- 4 : 4.00
rack travet um	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 1300
	403F
Rated speed rpm rack travel mm	: 1035 : 10.70
rack travet iiiii	. 10.70
Rated speed rpm	: 1110
Tolerance 1/min	: +- 4 : 4.00
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 1300
LOW IDLE	
control lever	
	: 71.0
position degree tolerance degree	: + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 100
CRT mm min.	: > 19.50
Testing:	
Rated speed rpm	: 350
rack travel mm	: 5.00
Tolerance mm	: +- 0.10
rack travel mm	: 2.00
Rated speed rpm	: 405
Tolerance 1/min	: +- 30
SET IDLE AUXILIAR	Y SPRING

rack travel mm	: 2.00
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 980 : 11.75 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 609 : 11.75 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 400 : 10.95 : + 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 400 : 1000 : 1.70 : + 0.05
Rated speed rpm Pressure hPa Tolerance mm	: 400 : - : + 0.05
MEASUREMENT	
Rated speed rpm	: 400
Pressure hPa rack travel mm Tolerance mm	: 360 : 0.40 : ← 0.10
Pressure hPa rack travel mm Tolerance mm	: 480 : 1.30 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1000 : 600 : 170.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- 3.0 : +- 6.0

Tolerance		
cm3/1000 strokes Check tolerance	: 8.0	
cm3/1000s.	: 12.0	
Aneroid pressure		
hPa	: 400	
Rated speed rpm Del. quantity	: 400	
cm3/1000 strokes	: 125.0	
Tolerance cm3/1000 strokes	: +- 1.0	
Check tolerance cm3/1000s.	: ← 4.0	
Spreed		
Tolerance cm3/1000 strokes	: 8.0	
	•	
Aneroid pressure		
Rated speed rpm	500	
Del. quantity cm3/1000 strokes	: 132.0	
Tolerance cm3/1000 strokes	: +- 1.0	
Check tolerance		
cm3/1000s. Spreed	: +- 4.0	
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance		
cm3/1000s.	: 12.0	
STARTING FUEL DEL	IVERY	
Rated speed rpm Del. quantity	: 100	
cm3/1000 strokes	: 180.0	
Tolerance cm3/1000 strokes	: + 10.0	
Check tolerance cm3/1000s.	: +- 14.0	
CHO7 10005.	. 14.0	
LOW IDLE		
Rated speed rpm	: 350	
Rack travel in mm		
Tolerance mm Del. quantity	: + 0.10	
cm3/1000 strokes Tolerance	: 19.0	
cm3/1000 strokes	: +- 3.0	

Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.09.96 : ISO 4113

Combination No. : 0 402 678 831

Injection pump

Pump designation : PE8P12OA320LS7901 EP type number : 0 412 628 918

Governor

Governer design. : RSV350...105CPOA651

Governer no. : 0 412 833 568

Cust. part No. : 0270745602

Customer-spec. information Customer : MB-NFZ : 0M442LA Motor

Power KW : 297.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : : +- 0.1 Tolerance bar

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : +- 0.50

: 8-7-2-6-3 :-5-4-1 Firing order

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 13.80 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 213.0

Tolerance

cm3/1000 strokes : + 1.5

Check tolerance cm3/1000s. : +- 4.5	Check tolerance cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 89.0
Rated speed rpm : 350	RATED SPEED rack travel mm : 12.80 Rated speed rpm : 1075 Tolerance 1/min : +- 5
Rack travel in mm: 5.70 Tolerance mm: + 0.10 Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1145 Tolerance 1/min : +- 15
<pre>cm3/1000 strokes : 19.0 Tclerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0</pre>	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1400
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 67.0
1	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 100
‡	CRT mm min. :> 19.50
control lever position degree : -3 Rated speed rpm : 800	Testing:
<u> </u>	Rated speed rpm : 350 rack travel mm : 5.70 Tolerance mm : + 0.10
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Tolerance mm : + 0.10
1000 47100 1777	rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 390 Tolerance 1/min : + 30
Rated speed rpm : 1050 Aneroid pressure	SET IDLE AUXILIARY SPRING
hPa : 1200 Del. quantity	rack travel mm : 2.00
cm3/1000 strokes : 213.0	TORQUE CONTROL
cm3/1000 strokes : + 1.5	Rated speed rpm : 1050
Check tolerance cm3/1000s. : + 4.5	rack travel mm : 13.80 Tolerance mm : +- 0.05
Spreed Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 600 rack travel mm : 14.20

Tolerance mm	: ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 860 : 14.00 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : -
MEASUREMENT	
Pressure hPa rack travel mm Tolerance mm	: 250 : 0.35 : + 0.05
Pressure hPa rack travel mm Toleranse mm	: 800 : 3.20 : +- 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 600
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 600
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1200 : 600 : 221.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 600 : 221.0 : + 1.5
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 600 : 221.0 : + 1.5 : + 4.5
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 600 : 221.0 : + 1.5 : + 4.5 : 8.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 600 : 221.0 : + 1.5 : + 4.5 : 8.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 600 : 221.0 : + 1.5 : + 4.5 : 8.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1200 : 600 : 221.0 : + 1.5 : + 4.5 : 8.0 : 12.0

STARTING FUEL DELE	EVERY	
Rated speed rpm Del. quantity	:	100
cm3/1000 strokes	:	250.0

cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm	:		350	
Tolerance mm	:	+-	5.70 0.10	
Del. quantity cm3/1000 strokes Tolerance	:		19.0	
cm3/1000 strokes Check tolerance	•	-	3.0	
cm3/1000s. Spreed	:	+-	6.0	
Tolerance cm3/1000 strokes	:		8.0	
Check tolerance cm3/1000s.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02,09,96 : ISO 4113

Combination No. : 0 402 678 834

Injection pump

Pump designation : PE8P12OA32OLS79O3 EP type number : 0 412 628 920

Governor

Governer design. : RSV600...950P0A663

Governer no. : 0 421 833 580

Cust. part No. : 027 074 4602

Customer-spec. information Customer : MB-NFZ Motor : 0M442A : 250.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0 temp. °C

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 110 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 2.5 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.50

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 930

Rack travel in mm: 12.90	+ Del. quantity + cm3/1000 strokes : 201.0
Tolerance mm : +- 0.05	+ Tolerance
Del. quantity	+ cm3/1000 strokes : +- 1.0 + Check tolerance
cm3/1000 strokes : 201.0	cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : +- 1.0	Tolerance : 5.0 Check tolerance
Check tolerance cm3/1000s. : +- 4.0	cm3/1000s. : 9.0
Spreed	CONTROL LEVER
Tolerance cm3/1000 strokes : 5.0	control lever position degree : 92.0
Check tolerance cm3/1000s. : 9.0	tolerance degree : +- 4.0
	ASSEMBLY GOVERNOR SETTING
Rated speed rpm : 600	Rated speed rpm : 970
Tolerance mm : + 0.10 - Del. quantity	+ rack travel mm : 11.90 +
cm3/1000 strokes : 18.0 - Tolerance	Rated speed rpm : 1035 Tolerance 1/min : +- 4
cm3/1000 strokes : +- 3.0	rack travel mm : 4.00
Check tolerance - cm3/1000s. : +- 6.0 -	+ rack travel mm : 0.85
Spreed - Tolerance -	Tolerance mm : +- 0.55
cm3/1000 strokes : 8.0	†
Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 971 rack travel mm : 11.90
. 12.0	+
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1036 + Tolerance 1/min : +- 4
WITH GOVERNOR	rack travel mm : 4.00
	rack travel mm : 0.85
GUIDE SLEEVE POSITION	Tolerance mm : +- 0.55
control lever	Rated speed rpm : 972 rack travel mm : 11.90
position degree : - 3	
Rated speed rpm : 800	Rated speed rpm : 1037 Tolerance 1/min : +- 4
Rack travel in mm: 0.50	rack travel mm : 4.00
Tolerance mm : + 0.20	
	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55
FULL LOAD DELIVERY AT FULL LOAD STOP	t
Rated speed rpm : 930	Raćed speed rpm : 973
Aneroid pressure -	rack travel mm : 11.90
hPa : 1000 -	+ Rated speed rpm : 1038

Tolerance 1/min rack travel mm		+ SETTING
rack travel mm Tolerance mm	: 0.85 : +- 0.55	Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 2.90 Tolerance mm : +- 0.05
Rated speed rpm rack travel mm	: 974 : 11.90	Rated speed rpm : 500 Pressure hPa : - Tolerance mm : +- 0.05
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	MEASUREMENT
rack travel mm Tolerance mm	: 0.85 : + 0.55	Pressure hPa : 470 rack travel mm : 0.70
Rated speed rpm rack travel mm	: 975 : 11.90	+ Tolerance mm : +- 0.10 + Pressure hPa : 630 + rack travel mm : 2.15 + Tolerance mm : +- 0.10
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	Tolerance mm : +- 0.10
rack travel mm Tolerance mm		FUEL DELIVERY CHARACTERISTICS
LOW IDLE		Aneroid pressure hPa : 1000 Rated speed rpm : 600 Del. quantity
control lever position degree tolerance degree		cm3/1000 strokes : 208.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance
Testing:	400	cm3/1000s. : +- 5.0 Spreed
Rated speed rpm Tolerance mm	: 600 : +- 0.10	Tolerance cm3/1000 strokes : 8.0 Check tolerance
SET IDLE AUXILIAR		+ cm3/1000s. : 12.0
rack travel mm	: 2.00	Aneroid pressure hPa : 1000
TORQUE CONTROL Rated speed rpm rack travel mm	: 12.90	Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 142.0
Tolerance mm	: +- 0.05	+ Tolerance + cm3/1000 strokes : +- 1.0
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.30 : +- 0.05	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

STARTING FUEL DELIVERY

100 Rated speed rpm :

Del. quantity cm3/1000 strokes : 190.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 600 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 18.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 27.08.96 : ISO 4113

Combination No. : 0 402 646 742

Injection pump

Pump designation : PE6P120A320LS7837-2

EP type number : 0 412 626 943

Governor

Governer design. : RQ300/1100PA1272 Governer no. : 0 421 801 804

Cust. part No. : 0270743002

Customer-spec. information Customer : MB-NFZ : 0M441 LA : 228.0 Motor Motor Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 120 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 20.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 6

CRT ZERO POSITION

Rack travel in mm : 12.60 Tolerance mm : +- 0.05

	+ Tolerance mm : +- 0.20
BASIC SETTING	Rated speed rpm : 1100 guide sleeve
Rated speed rpm : 600	travel mm : 6.00
Traded Special pill . Obb	Tolerance mm : +- 0.10
Rack travel in mm : 12.60	Rated speed rpm : 431
Tolerance mm : + 0.05	+ guide sleeve
	+ travel mm : 4.71
Del. quantity cm3/1000 strokes : 193.5	Tolerance mm : +- 0.10
173.5	Rated speed rpm : 570
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 6.00
	+ Tolerance mm : +- 0.10
Check tolerance	+
cm3/1090s. : +- 4.0	+ Rated speed rpm : 1350
	† guide steeve
Spreed	† travel mm : 11.50
 .	† Tolerance mm : +- 0.50
Tolerance	+
cm3/1000 strokes : 6.0	
Check tolerance	+ GUIDE SLEEVE POSITION
cm3/1000s. : 9.0	T
11137 10003 9.0	t control lever
	(
	, ,
Rated speed rpm : 300	+ Rated speed rpm : 650
Nated speed / pill : 300	Rack travel in mm: 20.00
Rack travel in mm : 5.60	+ Tolerance mm : +- 0.80
Tolerance mm : + 0.10	T roterance min . +- 0.00
Del. quantity	
cm3/1000 strokes : 19.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	TOLE BOND DEELVENT AT TOLE BOND STOT
cm3/1000 strokes : +- 3.0	Rated speed rpm : 600
Check tolerance	+ Aneroid pressure
cm3/1000s. : + 6.0	+ hPa : 600
Spreed	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 193.5
cm3/1000 strokes : 6.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : 10.0	+ Check tolerance
	+ cm3/1000s. : +- 4.0
•	+ Spreed
(B) SETTING OF INJECTION PUMP	+ Tolerance
WITH GOVERNOR	+ cm3/1000 strokes : 6.0
	+ Check tolerance
	+ cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	†
Rated speed rpm : 1153	†
Rated speed rpm : 1153 guide sleeve	- CONTROL LEVER
travel mm : 6.37	I CONTROL LEVER
Tolerance mm : +- 0.15	control lever
TOTAL GIRE WILL TOTAL	position degree : 94.0
Rated speed rpm : 300	tolerance degree : +- 4.0
guide sleeve	4.0
travel mm : 1.94	RATED SPEED
पंच्याप्रकाशास्त्र के 187∃	I WILL OF CEA

rack travel mm : 12.70 Rated speed rpm : 1140 Tolerance 1/min : +- 8 Check speed 1/min : +- 13	ANEROID/ALTITUDE COMPENSATOR TEST
rack travel mm : 4.00 Rated speed rpm : 1250 Tolerance 1/min : +- 15 Check speed 1/min : +- 20	2-stage LDA setting Rated speed rpm : 400 Pressure hPa : 600
rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1350	MEASUREMENT Pressure hPa : 350 rack travel mm : -0.80 Tolerance mm : +- 0.15
LOW IDLE	Pressure hPa : 200 rack travel mm : -2.00 Tolerance mm : +- 0.20
control lever position degree : 72.0 tolerance degree : + 4.0	Pressure hPa : 975 rack travel mm : G.50 Tolerance mm : +- 0.05
Setting point w/out bumper spring +	Start interlock
Rated speed rpm : 200	Rated speed rpm : > 100
CRT mm min. :> 9.00	Rated speed rpm : < 220
Testing:	Check speed 1/min : > 80
Rated speed rpm : 300 rack travel mm : 5.60 Tolerance mm : + 0.10	Check speed 1/min : < 240
rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL Rated speed rpm : 600 rack travel mm : 12.60 Tolerance mm : + 0.05	Aneroid pressure hPa : 1500 Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 219.0 Tolerance
Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.10	cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000S. : +- 4.5 Spreed
Rated speed rpm : 700 rack travel mm : 13.70 Tolerance mm : + 0.10	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
	Aneroid pressure hPa : 1500 Rated speed rpm : 700

Del. quantity cm3/1000 strokes : 214.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.: +-6.0 Aneroid pressure hPa 350 Rated speed rpm 400 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s.: +-4.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 151.0 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. ; +-4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : +- 19.0 LOW IDLE Rated speed rpm : 300 Rack travel in mm: 5.60 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0

Check tolerance cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.08.96 : ISO 4113 Test oil

Combination No. : 9 402 746 6090

Injection pump

Pump designation : PES6P130A720RS7411 EP type number : 0 412 736 808

Governor

Governer design. : RQ275/950PA1274 Governer no. : 0 421 801 807

Cust. part No. : 221 575

Customer-spec. information Customer : RABA

: siehe Bemerkung Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : + 2.0 Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.50 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +~ 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance $^{\circ}NW$: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 13.10 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 263.0

Talauana	
Tolerance -	guide steeve
cm3/1000 strokes : +- 1.0	travel mm : 6.00
Charle to Language	Tolerance mm : +- 0.10
Check tolerance	†
cm3/1000s. : +- 4.0	Rated speed rpm : 1200
Consideration	guide sleeve
Spreed -	travel mm : 11.50
▼ . Le	Tolerance mm : +- 0.50
Tolerance	†
cm3/1000 strokes : 5.0	
	GUIDE SLEEVE POSITION
Check tolerance	†
cm3/1000s. : 9.0	†
	control lever
•	position degree : 109
	Rated speed rpm : 1059
Rated speed rpm : 275	+
Bart Ann at Sa	Rack travel in mm: 10.90
Rack travel in mm: 4.20	Tolerance mm : +- 1.30
Tolerance mm : + 0.10	†
Del. quantity	
cm3/1000 strokes : 24.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance - 7.0	Date day 1
cm3/1000 strokes : $+$ 3.0	Rated speed rpm : 600
Check tolerance	Aneroid pressure
cm3/1000s. : + 6.0	hPa : 1500
Spreed -	Del. quantity
Tolerance -	cm3/1000 strokes : 263.0
cm3/1000 strokes : 8.0	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : 12.0 -	Check tolerance
•	+ cm3/1000s. + 4.0
(D) OFTENIO OF THEFOTTON DUMP	Spreed
(3) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR -	cm3/1000 strokes : 5.0
•	Check tolerance
CHIDE SLEEVE TRAVEL	cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 1007	
guide steeve	CONTROL LEVER
travel mm : 6.56	L CONTROL EEVER
Tolerance mm : + 0.15	control lever
TOCOL GLIGO TIME	position degree : 34.0
Rated speed rpm : 275 -	tolerance degree : + 4.0
guide sleeve	L TOTAL GOGICO T.O
travel mm : 2.06	control lever
Tolerance mm : + 0.20	position degree : 96.0
10101 11100 11111	tolerance degree : + 4.0
Rated speed rpm : 950	Local and degree 4.0
guide sleeve	RATED SPEED
travel mm : 6.00	rack travel mm : 12.10
Tolerance mm : +- 0.10	Rated speed rpm : 1095
-	Tolerance 1/min : +- 5
Rated speed rpm : 361	1000.0000000000000000000000000000000000
guide sleeve	rack travel mm : 4.00
travel mm : 4.45	Rated speed rpm : 1190
Tolerance mm : +- 0.10	Tolerance 1/min : + 15
	- Committee of the comm
Rated speed rpm : 450	rack travel mm : 0.50
eron mere eron de eron de eron de eron de eron de eron de eron de eron de eron de eron de eron de eron de eron	1 200 200 400

Tolerance mm : + 0.50 Rated speed rpm : 1300

LOW IDLE

control lever

position degree : 73.0 tolerance degree : + 4.0

control lever

position degree : 12.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 175

CRT mm min. : > 6.80

Testing:

Rated speed rpm : 275 4.20 rack travel mm : : +- 0.10 Tolerance mm

rack travel mm : 2.0 Rated speed rpm : 335 2.00 Tolerance 1/min : +- 20

TORQUE CONTROL

Rated speed rpm : 600 13.10 rack travel mm : Tolerance mm: +- 0.05

Rated speed rpm : 1050 rack travel mm : 13.10
Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 13.10 Tolerance mm : +- 0.05

Rated speed rpm : 500 Pressure hPa : 8.20 rack travel mm

Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 380 rack travel mm : 9.8 9.85 Tolerance mm : + 0.15

Pressure hPa : 600 rack travel mm : 12.05 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1500 Rated speed rpm : 1050

Del. quantity

cm3/1000 strokes : 252.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 147.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max.

control lever setting.

Rated speed rpm : rack travel mm : 100 20.50

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm	:	275	
Rack travel in mm Tolerance mm Del. quantity		4.20 0.10	
cm3/1000 strokes	:	24.0	
Tolerance cm3/1000 strokes	: :-	3.0	
Check tolerance cm3/1000S. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.08.96 Test oil : ISO 4113

Combination No. : 0 402 076 797

Injection pump

Pump designation : PES6P120A720RS3378 EP type number : 0 412 026 799

Governor

Governer design. : RSV450...1000P5A637

Governer no. : 0 421 833 548

Cust. part No. :

Customer-spec. information

Customer : IVECO-FIAT Motor : 8365.26.541 Power KW : 129.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 034

Inlet press. bar : 2.5

Overflow quantity
min. l/h : 240
Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.55
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 9.00

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 125.0

Tolerance

cm3/1000 strokes : +- 1.0

	A Charles I
Check tolerance	+ Check tolerance + cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	Spreed
	+ Tolerance
Spreed	+ cm3/1000 strokes : 5.0
Tolerance	+ Check tolerance + cm3/1000S. : 9.0
cm3/1000 strokes : 5.0	1 (11137 10003.
	+
Check tolerance	
cm3/1000s. : 9.0	+ CONTROL LEVER
quaptified that fills then they was stop four files the fills that they was again fill the days that	t control lever
	position degree : 102.0
Rated speed rpm : 450	tolerance degree : + 4.0
Dool, troval in m / 20	DATES COFFEE
Rack travel in mm : 4.20 Folerance mm : +- 0.10	+ RATED SPEED + rack travel mm : 8.00
Del. quantity	Rated speed rpm : 1070
cm3/1000 strokes : 20.0	+ Tolerance 1/min : +- 5
Tolerance	+ Check
cm3/1000 strokes : +- 3.0	+ speed 1/min : +- 10
Check tolerance cm3/1000s. : +- 6.0	t rack travel mm : 4.00
Spreed	+ Rated speed rpm : 1115
Tolerance	+ Tolerance 1/min : +- 15
cm3/1000 strokes : 8.0	+ Check
Check tolerance cm3/1000S. 12.0	+ speed 1/min : +- 20
cm3/1000s. : 12.0	rack travel mm : 0.85
	+ Tolerance mm : + 0.55
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1400
WITH GOVERNOR	+
	t rack travel mm : 4.00
	+ Rated speed rpm : 1125 + Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	+ Check
	+ speed 1/min : +- 20
annhard Inven	†
control lever position degree : - 3	I
Rated speed rpm : 800	
	LOW IDLE
Rack travel in mm: 0.50	†
Tolerance mm : +- 0.20	control Lever
governor spring	+ position degree : 80.0
pre-tension	+ tolerance degree : + 4.0
click setting x : 5.00	+
	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 450
TOLK BOND DELIVERS AT TOLK BOND STOP	+ rack travel mm : 3.70
Rated speed rpm : 1000	Tolerance mm : + 0.10
Aneroid pressure	+
hPa : -	+ Testing:
Del. quantity cm3/1000 strokes : 125.0	+ Rated speed rpm : 450
Tolerance	+ rack travel mm : 4.20
cm3/1000 strokes : + 1.0	+ Tolerance mm : + 0.10

rack travel mm	:		2.00
Rated speed rpm	:		560
Tolerance 1/min	:	+-	50

TORQUE	CONTROL		
Rated	speed rpm	:	1000

9.00 rack travel mm Tolerance mm : +- 0.05

Rated speed rpm : 500 rack travel mm 9.05 : +- 0.10 Tolerance mm

330 Rated speed rpm rack travel mm : 9.60 Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 96.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. 6.0

STARTING FUEL DELIVERY

100 Rated speed rpm :

Del. quantity cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm: 4.20 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 20.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

: +- 6.0 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.08.96 : 15.08.90 : ISO 4113 Test oil

Combination No. : 0 402 735 810

Injection pump

Pump designation : PES5P120A720/3LS7310

EP type number : 0 412 725 817

Governor

Governer design. : RQ325/1000PA1106-1

Governer no. : 0 421 801 700

Cust. part No. : 3-7324

Customer-spec. information Customer : MAN

Motor : D2865LUH06 Power KW : 191.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: +-20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.15 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 12.80 Tolerance mm : +- 0.50

Firing order : 1- 3- 5- 4- 2

: 0-72-144-216-288 Phasing

Tolerance : +- 0.50

Check

tolerance *NW : + - 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 5

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 10.80 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 235.0

Tolerance -	🕂 guide sleeve
cm3/1000 strokes : +- 1.0	† travel mm : 4.50
	Tolerance mm : +- 0.10
Check tolerance	1
cm3/1000s. : +- 4.0	Rated speed rpm : 530
	guide sleeve
Spreed	travel mm : 7.00
opi ded	Tolerance mm : + 0.10
Tolerance	Total arice man : +- 0.10
cm3/1000 strokes : 5.0	Dotted annual man 1220
Chist tood strokes . J.U	Rated speed rpm : 1220
Charle da Language	guide sleeve
Check tolerance	travel mm : 11.50
cm3/1000s. : 9.0	Tolerance mm : +- 0.50
	†
•	
	GUIDE SLEEVE POSITION
Rated speed rpm : 325	†
· · · · · · · · · · · · · · · · · · ·	+
Rack travel in mm: 4.90	control lever
Tolerance mm : +- 0.10	position degree : 109
Del. quantity	Rated speed rpm : 700
cm3/1000 strokes : 43.0	+
Tolerance	Rack travel in mm : 15.50
cm3/1000 strokes : +- 3.0	Tolerance mm : +- 0.80
Check tolerance -	
cm3/1000s. : +- 6.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	TOLL COMP PECTYENT AT TOLL COAP STOT
cm3/1000 strokes : 8.0	Rated speed rpm : 550
Check tolerance -	Aneroid pressure
cm3/1000s. : 12.0	
- TE.U	† nPa : 750 † Del. quantity
·	
(B) SETTING OF INJECTION PUMP	
	Tolerance
WITH GOVERNOR	cm3/1000 strokes : +- 1.0
•	Check tolerance
	cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL	Spreed
	Tolerance
Rated speed rpm : 1071 -	cm3/1000 strokes : 5.0
guide sleeve	Check tolerance
travel mm : 7.35	├ cm3/1000s. : 9.0
Tolerance mm : + 0.10 -	-
•	+
Rated speed rpm : 325	
guide sleeve	CONTROL LEVER
travel mm : 2.50	+
Tolerance mm : +- 0.10	control lever
	position degree : 100.0
Rated speed rpm : 1000	tolerance degree : +- 4.0
guide sleeve	
travel mm : 7.01 -	RATED SPEED
Tolerance mm : +- 0.10	rack travel mm : 11.20
	Rated speed rpm : 1053
Rated speed rpm : 777	Tolerance 1/min : +- 8
guide sleeve	L TOCCHARTO THINKING TO
travel mm : 7.01	rack travel mm : 4.00
Tolerance mm : +- 0.10	Rated speed rpm : 1130
TOTAL GUILLE IN THE OF THE STAT	
Pated around now : 400	Tolerance 1/min : + 15
Rated speed rpm : 408	Τ

rack travel mm	: 0.50	+ Rated speed rpm	: 500
olerance mm	: +- 0.50	+ Pressure hPa	: -
Rated speed rpm		+ rack travel mm	: 8.70
•		+ Tolerance mm	
		+	
		+ 2-stage LDA setti	na
		+	5
OW IDLE		+ Rated speed rpm	: 500
		+ Pressure hPa	: 750
		+ rack travel mm	: 10.80
control lever		1 ruek eravee min	. 10.00
osition degree	• 75.0	+ MEASUREMENT	
olerance degree		THEASONEMENT	
occidince degree	7.0	T Poted aread non	: 500
ettina naint w/a	uit himnon enning	+ Rated speed rpm	: 500
erring bount M/o	out bumper spring	Deserve how	. 700
1000d amand ama	. 200	+ Pressure hPa	
arted speed rpm	: 200	+ rack travel mm	: 9.00
.n.+	. 0.00	† Tolerance mm	: +- 0.05
RT mm min.	: > 8.00	†	
		+ Pressure hPa	: 500
Testing:		† rack travel mm	: 10.05
		† Tolerance mm	: + 0.15
ated speed rpm	: 325	+	
rack travel mm	: 4.90	+ Pressure hPa	: 1000
Tolerance mm	: +- 0.10	+ rack travel mm	: 11.05
		+ Tolerance mm	: +- 0.10
ack travel mm	: 2.00	1 Cocordine init	
ated speed rpm		Pressure hPa	. 1250
olerance 1/min	· - 20		
Oceratice (/iiiti)	20	+ rack travel mm	
· -		† Tolerance mm	: +- 0.15
COCOUE CONTESS:		†	
ORQUE CONTROL		†	
Rated speed rom	: 550	+	
ack travel mm olerance mm	: 10.80	+ FUEL DELIVERY CHA	RACTERISTIC
olerance mm	: +- 0.05	†	
		+	
Rated speed rpm		+ Aneroid pressure	
rack travel mm		† hPa	: 2000
rolerance mm	: 0.10	+ Rated speed rpm	: 750
		<pre>Del. quantity</pre>	
Rated speed rpm	: 1000	+ cm3/1000 strokes	: 264.0
ack travel mm		+ Tolerance	. 200
ack travel mm olerance mm	: +- 0.10	+ cm3/1000 strokes	: +- 2.0
		Check tolerance	. 2.0
		cm3/1000s.	: +- 5.0
men beens beta	. 1000		
ated speed rpm	: 1000	I cliis/1000s.	. +- 5.0
ted speed rpm ck travel mm		T (11137 10003.	. +- 5.0
ted speed rpm ock travel mm lerance mm		‡	
ated speed rpm ack travel mm olerance mm		Aneroid pressure	
ack travel mm olerance mm		Aneroid pressure	: 2000
ack travel mm olerance mm NEROID/ALTITUDE		Aneroid pressure	: 2000
eck travel mm olerance mm NEROID/ALTITUDE		Aneroid pressure	: 2000
ack travel mm plerance mm NEROID/ALTITUDE		Aneroid pressure hPa Rated speed rpm	: 2000 : 1000
ack travel mm olerance mm NEROID/ALTITUDE		Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 2000 : 1000
ack travel mm olerance mm NEROID/ALTITUDE OMPENSATOR TEST		Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 2000 : 1000 : 244.0
Rated speed rpm Pack travel mm Polerance mm INEROID/ALTITUDE POMPENSATOR TEST RETTING		Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 2000 : 1000 : 244.0
ack travel mm olerance mm NEROID/ALTITUDE OMPENSATOR TEST ETTING	: 12.60 : + 0.15	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 2000 : 1000 : 244.0 : +- 3.0
eck travel mm olerance mm NEROID/ALTITUDE OMPENSATOR TEST ETTING eated speed rpm	: 12.60 : + 0.15	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 2000 : 1000 : 244.0 : +- 3.0
ack travel mm olerance mm NEROID/ALTITUDE OMPENSATOR TEST ETTING ated speed rpm ressure hPa	: 12.60 : + 0.15 : 500 : 2000	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 2000 : 1000 : 244.0 : +- 3.0
ack travel mm olerance mm NEROID/ALTITUDE OMPENSATOR TEST ETTING ated speed rpm ressure hPa ack travel mm	: 12.60 : + 0.15 : 500 : 2000 : 12.20	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 2000 : 1000 : 244.0 : +- 3.0
ack travel mm olerance mm NEROID/ALTITUDE OMPENSATOR TEST ETTING ated speed rpm ressure hPa	: 12.60 : + 0.15 : 500 : 2000 : 12.20	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 2000 : 1000 : 244.0 : +- 3.0

500 Rated speed rpm : Del. quantity cm3/1000 strokes : 169.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm 8.70 : ← 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 95.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance : +- 14.0 cm3/1000s. LOW IDLE Rated speed rpm : 325 4.90 Rack travel in mm : Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 43.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance : 12.0 cm3/1000s. End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.08.96 : ISO 4113

Combination No. : 0 402 735 811

Injection pump

Pump designation : PES5P120A720/3LS7348

EP type number : 0 412 725 818

Governor

Governer design. : RQ325/1000PA1106-2

Governer no. : 0 421 801 750

Cust. part No. : 3-7392

Customer-spec. information

Customer : MAN

Motor

: D2865LUH06

Power KW

: 191.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

208.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter :

8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm : 5.15

: +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 12.80

Tolerance mm : +- 0.50

Firing order : 1-3-5-4-2

: 0-72-144-216-288 Phasing

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 5

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 12.20 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 264.0

Tolerance

cm3/1000 strokes : +- 1.0

J24

	+	Tolerance mm : +- 0.10
Check tolerance	+	
cm3/1000s.	: + 4.0	Rated speed rpm : 1210 guide sleeve
Spreed	+	travel mm : 11.50
Toloroo	+	Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: 8.0	
1		GUIDE SLEEVE POSITION
Check tolerance		
cm3/10005.	: 12.0	control lever
		position degree : 109
	1	Rated speed rpm : 700
Rated speed rpm	: 325	
Rack travel in mm	n: 4.90 +	Rack travel in mm : 15.50 Tolerance mm : +- 0.80
Tolerance mm	": + 0.10 I	roterance man : +- 0.00
Del. quantity	+	
cm3/1000 strokes	: 43.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes	: +- 3.0 +	Rated speed rpm : 750
Check tolerance	1	Aneroid pressure
cm3/1000s.	: +- 6.0 +	hPa : 2000
Spreed Tolerance	†	Del. quantity cm3/1000 strokes : 264.0
cm3/1000 strokes	: 8.0	Tolerance
Check tolerance	+	cm3/1000 strokes : $+-$ 1.0
cm3/1000s.	: 12.0	Check tolerance
	I	cm3/1000s. : +- 4.0 Spreed
(B) SETTING OF IN	JUECTION PUMP	Tolerance
WITH GOVERNOR	+	cm3/1000 strokes : 8.0
	<u>†</u>	Check tolerance cm3/1000s. : 12.0
GUIDE SLEEVE TRAV	/EL +	(1137 10003
Rated speed rpm	: 1059	
guide sleeve	+	CONTROL LEVER
travel mm Tolerance mm	: 7.34 : + 0.10	control lever
Totel di ice limi	1	position degree : 100.0
Rated speed rpm guide sleeve	: 325	tolerance degree : +- 4.0
travel mm	: 2.50	RATED SPEED
Tolerance mm	: + 0.10	rack travel mm : 11.20
Dotad erood er-	: 1000	Rated speed rpm : 1053
Rated speed rpm guide sleeve	. 1000	Tolerance 1/min : +- 8
travel mm	: 7.00	rack travel mm : 4.00
Tolerance mm	: + 0.10 +	Rated speed rpm : 1130
Rated speed rpm	: 401	Tolerance 1/min : +- 15
guide sleeve	+	rack travel mm : 0.50
travel mm	: 4.29	Tolerance mm : +- 0.50
Tolerance mm	: + 0.10	Rated speed rpm : 1250
Rated speed rpm	: 530	
guide sleeve	7 00	
travel mm	: 7.00 +	

LOW IDLE			
control lever position degree tolerance degree	: 73.0 : +- 4.0		
Setting point w/out bumper spring			
Rated speed rpm	: 200		
CRT mm min.	: > 8.00		
Testing:			
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.90 : ← 0.10		
rack travel mm Rated speed rpm Tolerance 1/min	-		
TCRQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.20 : + 0.05		
Røted speed rom rack travel mm Tolerance mm	: 1000 : 12.20 : +- 0.10		
Rated speed rpm rack travel mm Tolerance mm	: 550 : 10.80 : +- 0.10		
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.60 : +- 0.15		
ANEROID/ALTITUDE COMPENSATOR TEST			
SETTING			
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 2000 : 12.20 : + 0.05		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 8.70 : +- 0.10		

2-stage LDA settir	ng	
Rated speed rpm Pressure hPa rack travel mm	: :	500 750 10.80
MEASUREMENT		
Rated speed rpm	:	500
Pressure hPa rack travel mm Tolerance mm	: : +-	300 9.00 0.05
Pressure hPa rack travel mm Tolerance mm	: +-	500 10.05 0.15
Pressure hPa rack travel mm Tolerance mm	: 1 : -	000 11.05 0.10
Pressure hPa rack travel mm Tolerance mm	: +-	250 11.65 0.15
FUEL DELIVERY CHAR	RACTER	RISTICS

Aneroid pressure	
hPa	: 2000
Rated speed rpm	: 1000
Del. quantity	
cm3/1000 strokes	: 244.0
Tolerance	
cm3/1000 strokes	: - 3.0
Check tolerance	
cm3/1000s.	: +- 6.0
Spreed Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	. 0.0
cm3/1000s.	: 12.0
	, , , ,
	
Aneroid pressure	.
hPa	: 750
Rated speed rpm	: 550
Del. quantity	275 0
cm3/1000 strokes	: 235.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance	2.0
cm3/1000s.	: 5.0
Ciii 7 10000 .	
Aneroid pressure	
hPa	: -

Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 169.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 8.70 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 95.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm : 325 Rack travel in mm: 4.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 43.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.03.96 rattion : 16.U8.96 Test oil : ISO 4113

Combination No. : 0 402 744 805

Injection pump

Pump designation : PES4P120A320RS7312

: -1

EP type number : 0 412 724 803

Governor

Governer design. : RQ400/1200PA1319 Governer no. : 0 421 801 813

Cust. part No. : 51.11103-7553

Customer-spec. information

Customer : MAN

Motor : D 0824 LOH 05 Power KW : 114.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

: 40 : +- 2.0 temp. °C Tolerance °C

Overflow valve : 2 417 413 087

Inlet press. bar : 3.0 Tolerance bar : ← 0.1

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure bar : 208.5 Tolerance war : + 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Firing order : 1-3-4-2

Tolerance : 0-90-180-270

Check

tolerance "NW : +- 0.75

Start of delivery blocking

Tolerance : +- 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.05 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 206.0

Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 7.00 Tolerance mm : +- 0.10
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1390
Spreed	guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : 8.0	
Check tolerance cm3/1000s. : 12.0	GUIDE SLEEVE POSITION
	- control lever - position degree : 109 - Rated speed rpm : 1269
Rated speed rpm : 400	Rack travel in mm : 12.05
Rack travel in mm : 4.80 Tolerance mm : +- 0.10 Del. quantity	- Tolerance mm : +- 1.30
cm3/1000 strokes : 40.0 Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 3.0 Check tolerance	Rated speed rpm : 1000 Aneroid pressure
cm3/1000s. : +- 6.0 Spreed	hPa : 1200 Del. quantity
Tolerance - cm3/1000 strokes : 8.0	- cm3/1000 strokes : 206.0 - Tolerance
Check tolerance - cm3/1000s. : 12.0	cm3/1000 strokes : + 1.0 Check tolerance
	- cm3/1000s. : +- 4.0 - Spreed
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance cm3/1000 strokes : 8.0
	Check tolerance : 12.0
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 1256 - guide sleeve -	CONTROL LEVER
travel mm : 7.33	L CONTROL LEVER
Tolerance mm : +- 0.15	- control lever - position degree : 99.0
Rated speed rpm : 400 - guide sleeve -	tolerance degree : +- 4.0
travel mm : 2.94	- RATED SPEED
Tolerance mm : +- 0.20	rack travel mm : 12.05
Rated speed rpm : 1200 - guide sleeve	- Rated speed rpm : 1250 - Tolerance 1/min : +- 8
travel mm : 7.00	rack travel mm : 4.00
Tolerance mm : + 0.10	Rated speed rpm : 1335 Tolerance 1/min : + 15
Rated speed rpm : 443 - guide sleeve	rack travel mm : 0.50
travel mm : 4.95	- Tolerance mm : +- 0.50
Tolerance mm : + 0.10	- Rated speed rpm : 1400
Rated speed rpm : 530	-

LOW IDLE

control lever

position degree : 74.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm 300

CRT mon min. : > -1.00

Testina:

Rated speed rpm 400 rack travel mm 4.80 : + 0.10Tolerance mm

rack travel mm 2.00 Rated speed rpm 433 Tolerance 1/min

TORQUE CONTROL

1000 Rated speed rpm rack travel mm 13.05 Tolerance mm : +- 0.05

: 1200 Rated speed rpm rack travel mm 13.05 Tolerance mm : + 0.10

Rated speed rpm 700 13.05 rack travel mm : Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa : 1200 rack travel mm 13.05 Tolerance mm : +- 0.05

Rated speed rpm 500 : Pressure hPa : rack travel mm 8.90 Tolerance mm : +- 0.15

MEASUREMENT

Rated speed rpm : 500 Pressure hPa 200 rack travel mm 9.20 : + 0.15 Tolerance mm

Pressure hPa : 500 rack travel mm 11.85 Tolerance mm : + - 0.25

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 Rated speed rpm 1200

Del. quantity cm3/1000 strokes : 208.0

Tolerance

cm3/1000 strokes : +-3.0 Check tolerance

cm3/1000s. 6.0

Aneroid pressure

1200 hPa Rated speed rpm 700

Del. quantity

cm3/1000 strokes : 218.0 Tolerance

cm3/1000 strokes : +- 3.0Check tolerance

cm3/1000s.: +-6.0

Aneroid pressure

hPa Rated speed rpm 500

Del. quantity

cm3/1000 strokes : 137.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +-4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 8.90 : + - 0.30Tolerance mm

Del. quantity

cm3/1000 strokes : 50.0

Tolerance

cm3/1000 strokes : +- 8.0

Check tolerance

cm3/1000s. : + 12.0

LOW IDLE

Rated speed rpm	:	400
Rack travel in mm Tolerance mm Del. quantity	: +	4.80 - 0.10
714070	:	40.0
cm3/1000 strokes	; +	- 3.0
Check tolerance cm3/1000S. Spreed	: 1	⊢ 6.0
Tolerance cm3/1000 strokes	:	8.0
Check tolerance cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.08.96 : ISO 4113

Combination No. : 0 403 476 146

Injection pump

Pump designation : PES6MW100/320RS1245

EP type number : 0 413 406 247

Governor

Governer design. : RSV300...1100MW0A400

Governer no. : 0 420 085 293

Cust. part No. : 11032700

Customer-spec. information

Customer : VCE

Motor

: TD 63KDE

Power KW

: 90.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar . 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.05 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.35

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0	+ Check tolerance cm3/1000s. : +- 3.0
Spreed	+ Spreed + Tolerance
Tolerance cm3/1000 strokes : 3.5	- cm3/1000 strokes : 3.5 - Check tolerance - cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	
	+ CONTROL LEVER
Rated speed rpm : 300	<pre>- control lever - position degree : 81.0 - tolerance degree : +- 4.0</pre>
Rack travel in mm : 5.40 Tolerance mm : +- 0.10	+ RATED SPEED
Del. quantity	+ rack travel mm : 11.30
cm3/1000 strokes : 17.0	+ Rated speed rpm : 1145
Tolerance cm3/1000 strokes : +- 2.0	† Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1265
Spreed Tolerance	+ Tolerance 1/min : +- 15
cm3/1000 strokes : 3.5	rack travel mm : 1.00
Check tolerance cm3/1000s. : 5.5	+ Tolerance mm : +- 0.70
(iiis) 1900s. ; 5.5	+ Rated speed rpm : 1420
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1275 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	Ţ -
	+ LOW IDLE
control lever position degree : - 3	control lever
Rated speed rpm : 800	position degree : 106.0
Rack travel in mm : 0.65	tolerance degree : +- 4.0
Tolerance mm : +- 0.35	Setting point w/out bumper spring
governor spring	Rated speed rpm : 300
pre-tension click setting x : 5.00	+ rack travel mm : 4.90 + Tolerance mm : +- 0.10
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 100 + CRT mm min. :> 19.50
Rated speed rpm : 1100	- CAT (MIN) (1817). : > 19.30
Aneroid pressure	Testing:
hPa : 1500 Del. quantity	Rated speed rpm : 300
cm3/1000 strokes : 105.0	+ rack travel mm : 5.40
Tolerance cm3/1000 strokes : +- 1.0	+ Tolerance mm : + 0.10
amprigue scrokes 1.0	rack travel mm : 2.00

Rated speed rpm : 580 + Tolerance 1/min : +- 30 +	Tolerance : + 1.5
+	Check tolerance cm3/1000s. : +- 4.0
TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.35	Spreed Tolerance cm3/1000 strokes : 5.0
Tolerance mm : +- 0.05	Check tolerance cm3/1000s. : 7.0
Rated speed rpm : 500 rack travel mm : 13.90 Tolerance mm : + 0.10	Aneroid pressure
Rated speed rpm : 820	hPa : - Rated speed rpm : 500
rack travel mm : 12.80 Tolerance mm : +- 0.20	Del. quantity cm3/1000 strokes : 77.0
Rated speed rpm : 770 + rack travel mm : 13.10 +	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance mm : + 0.10	cm3/1000s. : +- 3.0
ANEROID/ALTITUDE COMPENSATOR TEST	STARTING FUEL DELIVERY
<u> </u>	Rated speed rpm : 100
SETTING	rack travel mm : 20.00 Tolerance mm : +- 1.00
Rated speed rpm : 500 Pressure hPa : 1500	Del. quantity cm3/1000 strokes : 100.0
rack travel mm : 13.90 + Tolerance mm : + 0.10 +	Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
Rated speed rpm : 500 Pressure hPa : -	cm3/1000s. : +- 8.0
rack travel mm : 11.05 Tolerance mm : + 0.10	
MEASUREMENT	LOW IDLE
Rated speed rpm : 500	Rated speed rpm : 300
Pressure hPa : 290 + rack travel mm : 13.00 + Tolerance mm : + 0.10 +	Rack travel in mm : 5.40 Tolerance mm : +- 0.10 Del. quantity
Pressure hPa : 120	cm3/1000 strokes : 17.0 Tolerance
rack travel mm : 11.45 Tolerance mm : + 0.05	cm3/1000 strokes : +- 2.0 Check tolerance
	cm3/1000s. : +- 4.5 Spreed Tolerance
FUEL DELIVERY CHARACTERISTICS	cm3/1000 strokes : 3.5 Check tolerance
Aneroid pressure	cm3/1000s. : 5.5
hPa : 1500 Rated speed rpm : 500	
Del. quantity + cm3/1000 strokes : 130.0 +	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 10.06.97 Edition : ISO-4113 Test oil

Combination No. : 0 400 846 509

Injection pump

Pump designation : PES6A95D4O2LS2542 EP type number : 0 410 896 936

Governor Governer design. : RQ250/1100AB1137-8L

Governer no. : 0 420 200 090

Cust. part No. :

Customer-spec. information

Customer : MAN

Motor : D2566 MUH

TEST BENCH REQUIREMENTS

Test oil inlet

: 40.0 temp. °C Tolerance °C : +- 2.0

Inlet press. bar : 1.50

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Outside diameter : 6.00

x inside diameter: 2.00 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 1.55
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-4

Phasing : 0-60-120-180-240

: -300

: + 0.50Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.15

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 103.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : +- 3.00

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 6.0

Rated speed rpm : 250

Rack travel in mm : 7.00
Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 12.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s, : + 5.50

Spreed Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 5.0

(B) SETTING OF INJECTION FUMP

WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 600

Rack travel in mm : 16.00

Tolerance mm : \div 0.40

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 103.00

Tolerance

cm3/1000 strokes : + 1.60

Check tolerance

cm3/1000s. : + 3.00

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 6.0

RATED SPEED

rack travel mm : 16.0 Rated speed rpm : 600

rack travel mm : 8.60
Rated speed rpm : 1152.5
Tolerance 1/min : + 7.5

rack travel mm : 4.00
Rated speed rpm : 1230.0

Tolerance 1/min : +- 15.0

rack travel mm : 0.50
Tolerance mm : +- 0.50
Rated speed rpm : 1300

LOW IDLE

Setting point w/out bumper spring

Rated speed rpm : 250 rack travel mm : 7.0

Rated speed rpm : 100

CRT mm min. : 8.50

Testing:

Rated speed rpm : 250 rack travel mm : 7.00 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 400.0
Tolerance 1/min : +- 20.0

TORQUE CONTROL

Dimension a mm : 0.80
Rated speed rpm : 700
rack travel mm : 11.15
Tolerance mm : +- 0.05

Rated speed rpm : 600 rack travel mm : 11.15 Tolerance mm : + 0.05

Rated speed rpm : 885 rack travel mm : 10.70 Tolerance mm : +- 0.10

Rated speed rpm : 980 rack travel mm : 9.85 Tolerance mm : +- 0.15

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 1100

Del. quantity

cm3/1000 strokes : 92.00

K09

Tolerance

cm3/1000 strokes : + 1.50

Check tolerance

cm3/1000s. : +- 4.00

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 104.50

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

rack travel mm : 14.70 Tolerance mm : +- 0.30

Del. quantity

cm3/1000 strokes : 135.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s. : +-8.00

LOW IDLE

Rated speed rpm : 250

Rack travel in mm : 7.00

Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 12.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 5.50

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.02.90 : ISO-4113

Combination No. : 0 400 846 569

Injection pump

Pump designation : PES6A95D32ORS2770

EP type number : 0 410 896 905

Governor

Governer design. : RQV350...1350AB1236

: -3R

Governer no.

: 0 420 213 112

Cust. part No. : 1811834093

Customer-spec. information Customer : NAVISTAR Motor : DT 360

Power KW

: 127.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : + 2.0

Overflow valve : 2 417 413 038

Inlet press. bar : 2.80

Test nozzle holde

assembly

: 1 688 901 110

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.00

x inside diameter: 2.00

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 28.0

Tolerance bar : +- 1.0

Prestroke mm : 2.80 Tolerance mm : +- 0.05

Check

tolerance mm : $\leftarrow 0.10$

Firing order

: 1-5- 3- 6- 2

: - 4

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1350

Rack travel in mm : 11.45

Tolerance mm : +-0.05

Del. quantity

cm3/1000 strokes : 76.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +3.00

Spreed

Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 Rated speed rpm : 350.0 Rack travel in mm: 5.80 Tolerance mm : + 0.10Del. quantity cm3/1000 strokes : 15.00 Tolerance cm3/1000 strokes : +- 2.00 Check tolerance cm3/1000s. : +- 4.50 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s.: 5.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1350 guide sleeve : 7.40 travel mm: Tolerance mm : + - 0.10Rated speed rpm : 1460 guide sleeve : 8.30 travel mm Tolerance mm : + 0.20: 550 Rated speed rpm guide sleeve : 3.40 travel mm : +- 0.30 Tolerance mm Rated speed rpm : 350 guide sleeve : 1.50 travel mm Tolerance mm : +- 0.20

GUIDE SLEEVE POSITION control lever

: -1

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1350 Aneroid pressure hPa : 900

Del. quantity cm3/1000 strokes : 76.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 3.00

Spreed Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 6.0

CONTROL LEVER

control lever

position degree : 50.0 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.40 Rated speed rpm : 1430.0 Tolerance 1/min : +- 15.0

rack travel mm : 4.00 Rated speed rpm : 1535.0 Tolerance 1/min : +- 5.0

rack travel mm : 4.00

rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1600

LOW IDLE

control lever

position degree : 12.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 350 : 5.8 rack travel mm

Rated speed rpm : 100

CRT mm min. : 9.00

Testing:

position degree

Rated speed rpm : 350 rack travel mm : 5.80 Tolerance mm : +- 0.10

rack travel mm : 2.00

TORQUE CONTROL

Rated speed rpm : 1350 rack travel mm : 11.45 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 900
rack travel mm : 11.45
Tolerance mm : +- 0.05

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 8.75
Tolerance mm : + 0.15

Pressure hPa : 240 rack travel mm : 9.35 Tolerance mm : +- 0.05

Pressure hPa : 480 rack travel mm : 10.90 Tolerance mm : + 0.20

Start interlock

Rated speed rpm : 290

Check

speed 1/min : 300

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 54.00

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50

Del. quantity

cm3/1000 strokes : 145.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s. : +15.00

LOW IDLE

Rated speed rpm : 350.0

Rack travel in mm : 5.80 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance

cm3/1000s. : +- 4.50

Spreed Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.08.89 Test oil : ISO-4113

Combination No. : 0 401 840 109

Injection pump

Pump designation : PE12P120A520/4LS857

EP type number : 0 411 820 035

Governor

Governer design. : RQV250...1050PA889

Governer no. : 0 421 813 696

Cust. part No. : 2-7906

Customer-spec. information

Customer : MAN

Motor : D2542TE60

: 361.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.00

x inside diameter: 3.00 x Length mm : 1000 **REMARKS**

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 3.05 Tolerance mm : +- 0.05

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +-1.50

Firing order : 12-1-5-9-8

: - 3- 4- 11- 10 : - 2- 6

Phasing : 0-45-60-105-120-165

: -180-225-240-285

: -300-345

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

Start of delivery mark

Barrel no. : 12

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 8.25

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 146.00

Tolerance

cm3/1000 strokes : +-1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 250.0 Rack travel in mm : 4.20 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 20.00 Tolerance cm3/1000 strokes : +- 3.00 Check tolerance cm3/1000s. : +- 6.00 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.00 Tolerance mm : +- 0.20 Rated speed rom : 700 guide sleeve : 4.80 travel mm Tolerance mm : +- 0.20 Rated speed rpm : 1050 guide sleeve travel mm : 7.50 Tolerance mm : +- 0.10 Rated speed rpm : 1400 guide sleeve : 11.50 travel mm Tolerance mm : +- 0.50

Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 146.00 Tolerance cm3/1000 strokes : +- 1.00Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 115.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 16.5 : 1125 Rated speed rpm : 7.20 rack travel mm Rated speed rpm : 1095.0 Tolerance 1/min : +- 5.0 rack travel mm : 4.00 Rated speed rpm : 1155.0 Tolerance $1/\min$: \leftarrow 15.0 rack travel mm : 0.50 Tolerance mm : + 0.50Rated speed rpm : 1400 LOW IDLE control lever position degree : 64.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 250

rack travel mm

Rated speed rpm : 1125

position degree : -1

GUIDE SLEEVE POSITION

Rated speed rpm : 100

CRT mm min. : 5.70

Testing:

: 250 Rated speed rpm rack travel mm : 4.20 Tolerance mm : +- 0.10

rack travel mm : 2.00

TORQUE CONTROL

Rated speed rpm : 1050 rack travel mm : 8.25 Tolerance mm : +· 0.05

Start interlock

Rated speed rpm : 190

Check

speed 1/min : 210

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

Rated speed rpm : 250.0

Rack travel in mm : 4.20 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 05.03.90 : ISO-4113

Combination No. : 0 401 846 530

Injection pump

Pump designation : PE6P110A320RS407-1

EP type rumber : 0 411 816 147

Governor

Governer design. : RQ275/1000PA818 Governer no. : 0 421 801 360

Cust. part No. :

Customer-spec. information

Customer : DAF

: LT 160 Motor Power KW : 160.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter: 3.00 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

: +- 0.75 tolerance °NW

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.05

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 135.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 3.50

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s.

: 7.0

Rated speed rpm : 275.0

Rack travel in mm : 7.40
Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 16.50

Tolerance

cm3/1000 strokes : + 2.50

Check tolerance

cm3/1000s. : +- 5.00

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 600

Rack travel in mm : 16.00

Tolerance mm : +- 0.40

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 135.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : +- 3.50

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

RATED SPEED

rack travel mm : 16.0 Rated speed rpm : 600

rack travel mm : 10.00 Rated speed rpm : 1037.5 Tolerance 1/min : +- 7.5

rack travel mm : 4.00 Rated speed rpm : 1105.0 Tolerance 1/min : +- 15.0

rack travel mm : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 1300

LOW IDLE

control lever

position degree : 76.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 275 rack travel mm : 7.4

Rated speed rpm : 100

CRT mm min. : 8.60

Testing:

Rated speed rpm : 275
rack travel mm : 7.40
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 370.0
Tolerance 1/min : +- 20.0

TORQUE CONTROL

Dimension a mm : 0.60
Rated speed rpm : 600
rack travel mm : 12.05
Tolerance mm : +- 0.05

Rated speed rpm : 550 rack travel mm : 12.40 Tolerance mm : + 0.10

Rated speed rpm : 745
rack travel mm : 12.00
Tolerance mm : + 0.10

Rated speed rpm : 880 rack travel mm : 11.35 Tolerance mm : +- 0.15

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 980

Del. quantity cm3/1000 strokes : 114.00

Tolerance

cm3/1000 strokes : $\leftarrow 2.00$

Check tolerance

cm3/1000s. : +- 5.00

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : +- 0.75

Del. quantity

cm3/1000 strokes : 245.00

Tolerance

cm3/1000 strokes : +- 20.00

Check tolerance

cm3/1000s. : +- 24.00

LOW IDLE

Rated speed rpm : 275.0

Rack travel in mm: 7.40 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 16.50

Tolerance

cm3/1000 strokes : $\leftarrow 2.50$

Check tolerance

cm3/1000s.: +- 5.00

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.12.89 Test oil : 15.12.07

Combination No. : 0 401 846 548

Injection pump

Pump designation : PE6P12OA32ORS257 EP type number : 0 411 826 075

Governor

Governer design. : RQ250/1100PA877 Governer no. : 0 421 801 409

Cust. part No. : 181335

Customer-spec. information Customer : ENASA Motor : 96T1AZ Power KW : 228.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40.0 Tolerance $^{\circ}$ C : \div 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00 x length mm : 1000 REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 10.95 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 185.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s: +4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

Rated speed rpm : 250.0

Rack travel in mm: 5.60

: + 0.10Tolerance mm

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s.: +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 550

Rack travel in mm: 16.00

Tolerance mm : +- 0.60

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 600

Aneroid pressure

hPa : 900

Del. quantity

cm3/1000 strokes : 185.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000S. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000S. : 9.0 CONTROL LEVER

control lever

position degree : 96.0

tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 16.0

Rated speed rpm : 550

rack travel mm : 9.60 Rated speed rpm : 1152.5

Tolerance $1/\min$: + 7.5

rack travel mm : 4.00

Rated speed rpm : 1205.0

Tolerance 1/min : +- 15.0

rack travel mm : 0.50

Tolerance mm : +- 0.50 Rated speed rpm : 1300

LOW IDLE

control lever

position degree : 76.0

tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 250

rack travel mm : 5.6

Rated speed rpm : 100

CRT mm min. : 7.10

Testing:

Rated speed rpm : 250

rack travel mm : 5.60

Tolerance mm : + 0.10

rack travel mm : 2.00

Rated speed rpm : 360.0

Tolerance $1/\min$: +- 20.0

TORQUE CONTROL

Dimension a mm : 0.20

Rated speed rpm : 600

rack travel mm : 10.95 Tolerance mm : +- 0.05 Rated speed rpm : 1080 rack travel mm : 10.70 Tolerance mm : +- 0.10

Rated speed rpm : 720
rack travel mm : 10.80
Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 900
rack travel mm : 10.95
Tolerance mm : +- 0.05

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 8.90 Tolerance mm : +- 0.20

Pressure hPa : 340 rack travel mm : 9.35 Tolerance mm : +- 0.05

Pressure hPa : 470
rack travel mm : 10.20
Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 1080

Del. quantity

cm3/1000 strokes : 201.00

Tolerance

cm3/1000 strokes : $\leftarrow 3.00$

Check tolerance

cm3/1000s. : $\leftarrow 6.00$

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 131.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 140.00

Tolerance

cm3/1000 strokes : + 10.00

Check tolerance

cm3/1000s. : +- 14.00

LOW IDLE

Rated speed rpm : 250.0

Rack travel in mm : 5.60 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.04.90 Test oil : ISO-4113

Combination No. : 0 401 846 907

Injection pump

Pump designation : PE69120A32CLS3815

: -13

EP type number : 0 411 826 782

Governor

Governer design. : RQV350..1050PA925

Governer no. : 0 421 813 764

Cust. part No. :

Customer-spec. information:

Customer : DB-NKW Motor : OM 441

Power KW

: 0M 441 A : 191.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Overflow quantity

min. L/h : 110.0 Tolerance l/h : + 10.0

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : +- 1.0

Prestroke mm : 3.65
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 6-3-5-2-4

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 11.45

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 183.50

Tolerance

cm3/1000 strokes : +- 1.50

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Check tolerance cm3/1000s.: +- 4.50 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 350.0 Rack travel in mm: 4.90 Tolerance mm : +- 0.30Del. quantity cm3/1000 strokes : 18.00 Tolerence cm3/1000 strokes : +- 4.00 Check tolerance cm3/1000s.: + 7.00Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.50 Tolerance mm : + 0.10Rated speed rpm : 800 auide sleeve travel mm : 4.90 Tolerance mm : + - 0.20Rated speed rpm : 1100 guide sleeve travel mm : 7.90 Tolerance mm : +- 0.30 Rated speed rpm : 1175 guide sleeve travel mm : 9.50 : +- 0.30 Tolerance mm

control lever position degree : -1 Rated speed rpm : 1080 Rack travel in mm : 16.50 Tolerance mm : +-1.30FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 183.50 Tolerance cm3/1000 strokes : +- 1.50Check tolerance cm3/1000s. : +- 4.50 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 118.0 tolerance degree : +- 4.0 RATED SPEED : 16.5 rack travel mm Rated speed rpm : 1080 rack travel mm : 10.70 Rated speed rpm : 1095.0 Tolerance $1/\min$: +- 5.0 rack travel mm : 4.00 Rated speed rom : 1165.0 Tolerance 1/min : + 15.0 rack travel mm : 0.50 Tolerance mm : + 0.50Rated speed rpm : 1250

LOW IDLE

control lever

position degree : 68.0 tolerance degree : +- 4.0

GUIDE SLEEVE POSITION

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 4.9

Rated speed rpm : 250

CRT mm min. : 8.00

Testing:

Rated speed rpm : 350 rack travel mm : 4.90 Tolerance mm :

→ 0.30

TORQUE CONTROL

Dimension a mm : 1.30
Rated speed rpm : 1050
rack travel mm : 11.45
Tolerance mm : + 0.05

Rated speed rpm : 950 rack travel mm : 12.00 Tolerance mm : + 0.10

Rated speed rpm : 850 rack travel mm : 12.50 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 400 rack travel mm : 0.90 Tolerance mm : + 0.10

Pressure hPa : 600 rack travel mm : 2.60 Tolerance mm : + 0.20

Start interlock

Rated speed rpm : 270

Check

speed 1/min : 290

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 211.00

Tolerance

cm3/1000 strokes : \leftarrow 2.00

Check tolerance

cm3/1000s. : +- 5.00

Spreed Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.

Rated speed rpm : 1050

Del. quantity

cm3/1000 strokes : 156.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1900s. : +- 4.00

Spreed

Check tolerance

cm3/1000s. : 12.00

Aneroid pressure

hPa :)

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 130.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 200.00

Tolerance

cm3/1000 strokes : $\leftarrow 10.00$

Check tolerance

cm3/1000s. : +- 14.00

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LOW IDLE

Rated speed rpm : 350.0

Rack travel in mm : 4.90 Tolerance mm : +- 0.30

Del. quantity

cm3/1000 strokes : 18.00

Tolerance

cm3/1000 strokes : +- 4.00

Check tolerance

cm3/1000s. : +- 7.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23,03,90 : ISO-4113

Combination No. : 0 401 848 807

Injection pump

Pump designation : PE8P130A520/4RS3126

EP type number : 0 411 838 707

Governor

Governer design. : RQV400...750PA934-1

Governer no. : 0 421 813 817

Cust. part No.

Customer-spec. information

Customer

: BAUDOUIN

Motor

: 81:15

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

: 40.0 : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar

: + 1.5

Test lines

: 1 680 750 074

Outside diameter : 6.00

x inside diameter: 3.00

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85

Tolerance mm

: + - 0.05

Check

to!erance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm

: +- 1.50

Firing order : 1-2-4-5-6-3

: - 7- 8

Phasing : 0-45-90-135-180-225

: -270-315 : + 0.50

Tolerance

Check tolerance *NW

: +- 0.75

Start of delivery mark

Barrel no.

: 1

BASIC SETTING

Rated speed rpm

: 700

Rack travel in mm: 9.35

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 193.50

Tolerance

cm3/1000 strokes : + 1.50

Check tolerance

cm3/1000s.

: +- 5.00

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s.

: 10.0

Rated speed rpm : 400.0

Rack travel in mm : 5.00 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 26.00

Tolerance

cm3/1000 strokes : \leftarrow 3.00

Check tolerance

cm3/1000s. : $\leftarrow 7.00$

Spreed Tolerance

cm3/1000 strokes : 10.0

Check tolerance

cm3/1000s. : 14.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

MILL GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 400

guide sleeve

travel mm : 1.00 Tolerance mm : +- 0.10

Rated speed rpm : 475

guide sleeve

travel mm : 2.00 Tolerance mm : +- 0.10

Rated speed rpm : 600

guide sleeve

travel mm : 2.00
Tolerance mm : + 0.10

Rated speed rpm : 750

quide sleeve

travel mm : 5.50 Tolerance mm : + 0.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 193.50

Tolerance

cm3/1000 strokes : + 1.50

Check tolerance

cm3/1000s. : + 5.00

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

CONTROL LEVER

control lever

position degree : 112.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 8.30 Rated speed rpm : 752.5

Tolerance 1/min : +- 2.5

rack travel mm : 4.00Rated speed rpm : 775.0Tolerance $1/\min$: $\leftarrow 5.0$

rack travel mm : 0.50
Tolerance mm : + 0.50

Rated speed rpm : 900

LOW IDLE

control lever

position degree : 86.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 400 rack travel mm : 5.0

Rated speed rpm : 100

CRT mm min. : 6.50

Testing:

Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : $\leftarrow 0.10$

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 9.35 Tolerance mm : + 0.05

Start interlock

Rated speed rpm : 340

Check

speed 1/min : 360

LOW IDLE

Rated speed rpm : 400.0

Rack travel in mm : 5.00 : +- 0.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 26.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance cm3/1000s. : + 7.00

Spreed Tolerance

cm3/1000 strokes : 10.0

Check tolerance

cm3/1000s. : 14.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 05.03.90 Test oil : ISO-4113

Combination No. : 3 481 848 889

Injection pump

Pump designation : PE8P110A320LS3842-1

EP type number : 0 411 818 716

Governor

Governer design. : RQV350..1050PA378-7

Governer no. : 0 421 813 714

Cust. part No. :

Customer—spec. information
Customer : MB—NFZ
Motor : 9M/42
Power KW : 213.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Overflow quantity

min. L/h : 110.0 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter : 3.00
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.05 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 8-7-2-6-3-5

: - 4- 1

Phasing : 0-45-90-135-180-225

: -270-315

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.75
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 138.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance cm3/1000s. : +- 3.50 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.0 Rated speed rpm : 350.0 Rack travel in mm : 8.15 Tolerance mm: +-0.15Del. quantity cm3/1000 strokes : 18.00 Tolerance cm3/1000 strokes : +- 3.00Check tolerance cm3/1000s.: +- 5.50 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.60 Tolerance nm : + 0.10Rated speed rpm : 800 guide sleeve : 5.10 travel mm Tolerance mm : + 0.20: 1100 Rated speed rpm guide sleeve

travel mm : 8.20 Tolerance mm : + 0.30Rated speed rpm : 1150 guide sleeve : 9.30 travel mm Tolerance mm : +- 0.40

Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 138.00 Tolerance cm3/1000 strokes : +- 1.00Check tolerance cm3/1000s. : + 3.50Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.0 CONTROL LEVER control lever position degree : 118.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 16.5 Rated speed rpm : 1110 rack travel mm : 11.70 Rated speed rpm : 1095.0 Tolerance $1/\min$: +-5.0rack travel mm : 4.00 Rated speed rpm : 1155.0 Tolerance $1/\min$: \leftarrow 15.0 rack travel mm : 0.50 : +- 0.50 Tolerance mm Rated speed rpm : 1350 LOW IDLE

control lever

position degree : -1

Rated speed rpm : 1110

control lever

position degree : 70.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

GUIDE SLEEVE POSITION

Rated speed rpm : 350 rack travel mm : 8.1

Rated speed rpm : 250

CRT mm min. : 9.50

Testing:

: 350 Rated speed rpm rack travel mm : 8.15 Tolerance mm : +- 0.15

TORQUE CONTROL

Rated speed rpm : 1050 rack travel mm : 12.75 Tolerance am : + 0.05

Start interlock

Rated speed rpm : 270

Check

speed 1/min : 290

FUEL DELIVERY CHARACTERISTICS

: 750 Rated speed rpm

Del. quantity

cm3/1000 strokes : 126.00

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance

cm3/1000s.: +- 5.00

Spreed Tolerance

cm3/1000 strokes : 5.00

Check tolerance

cm3/1000s. : 8.

Rated speed rpm : 1050

Del. quantity cm3/1000 strokes : 88.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 6.00

Check tolerance

cm3/1000s. : 9.00 STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 150.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s. : +- 14.00

LOW IDLE

Rated speed rpm : 350.0

Rack travel in mm : 8.15 Tolerance mm : + - 0.15

Del. quantity

cm3/1000 strokes : 18.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 5.50

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s.: 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.03.90 Test oil : ISO-4113

Combination No. : 0 401 848 811

Injection pump

Pump designation : PE8P110A320LS3842-2

EP type number : 0 411 818 722

Governor

Governer design. : RQV350..1050PA378

: -11

Governer no. : 0 421 813 714

Cust. part No. :

Customer—spec. information
Customer : MB-NFZ
Motor : 0M442
Power KW : 213.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Overflow quantity

min. L/h : 110.0 Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter : 3.00
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.05 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 8- 7- 2- 6- 3- 5

: - 4- 1

Phasing : 0-45-90-135-180-225

: -270-315 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.75
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 138.00

Tolerance

cm3/1000 strokes : +- 1.00

L05

Check tolerance cm3/1000s.: +- 3.50 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.0 Rated speed rpm : 350.0 Rack travel in mm : 8.15 Toterance mm : +- 0.15 Del. quantity cm3/1000 strokes : 18.00 Tolerance cm3/1000 strokes : + 3.00Check tolerance cm3/1000s. : +- 5.50 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve : 1.60 travel mm Tolerance mm : + 0.10Rated speed rpm : 800 quide sleeve travel mm : 5.10 : +- 0.20 Tolerance mm Rated speed rpm : 1100 guide sleeve travel mm : 8.20 : + 0.30Tolerance mm Rated speed rpm : 1150

guide sleeve travel mm : 9.30

: +- 0.40

control lever position degree : -1 Rated speed rpm : 1110 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 138.00 Tolerance cm3/1000 strokes : + 1.00Check tolerance cm3/1090s. : +- 3.50 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/100Cs. : 7.0 CONTROL LEVER control lever position degree : 118.0 tolerance degree : +- 4.0 RATED SPEED

rack travel mm : 16.5 Rated speed rpm : 1110

rack travel mm : 11.70 Rated speed rpm : 1095.0 Tolerance 1/min : +- 5.0

rack travel mm : 4.00 Rated speed rpm : 1155.0 Tolerance 1/min : +- 15.0

rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 70.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Tolerance mm

GUIDE SLEEVE POSITION

Rated speed rpm : 350 rack travel mm : 8.1

Rated speed rpm : 250

CRT mm min. : 9.50

Testing:

Rated speed rpm : 350 rack travel mm : 8.15 Tolerance mm : + 0.15

TORQUE CONTROL

: 1050 Rated speed rpm rack travel mm : 12.75 Tolerance nam : + 0.05

Start interlock

Rated speed rpm : 270

Check

speed 1/min : 290

FUEL DELIVERY CHARACTERISTICS

: 750 Rated speed rpm

Del. quantity cm3/1000 strokes : 126.00

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance : -- 5.00

cm3/1000s. Spreed

Tolerance

cm3/1000 strokes : 5.00

Check tolerance

cm3/1000s. : 8.

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 160.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s. : +- 14.00 LOW IDLE

Rated speed rpm : 350.0

Rack travel in mm: 8.15 Tolerance mm : +- 0.15

Del. quantity

cm3/1000 strokes : 18.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 5.50

Spreed Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.01.90 Test oil : ISO-4113

Combination No. : 0 401 849 744A

Injection pump

Pump designation : PE10P120A520/4LS3849

EP type number : 0 411 829 708

Governor

Governer design. : RQ750PA663-7 Governer no. : 0 421 801 331

Cust. part No. : 2-7976

Customer-spec. information

Customer : MAN

Motor : D2840 LE Power KW : 405.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00 x length mm : 1000 **REMARKS**

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 10- 9- 4- 1- 8

: - 7- 6- 3- 5 : - 2

Phasing : 0-45-72-117-144-189

: -216-261-288-333

Tolerance : +- 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery mark

Barrel no. : 10

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 12.55 Tolerance mm : +0.05

Del. quantity

cm3/1000 strokes : 237.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

L08

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

: 9.0

Rated speed rpm : 300.0

Rack travel in mm: 4.70

Tolerance mm : +- 0.20

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cin3/1000 strokes : +3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.3

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 850

Del. quantity

cm3/1000 strokes : 237.00

Tolerance

cm3/1000 strukes : + 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

RATED SPEED

rack travel mm : 0.50

: +- 0.50 Tolerance mm

Rated speed rpm : 950

LOW IDLE

Testing:

L09

rack travel mm : 4.70 Tolerance mm : +- 0.20

TORQUE CONTROL

Rated speed rpm : 850

rack travel mm : 12.55 Tolerance mm : +- 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

Rated speed rpm : 300.0

Rack travel in mm: 4.70

Tolerance mm : +- 0.20

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.01.90 : ISO-4113 Test oil

Combination No. : 0 401 849 746

Injection pump

Pump designation : PE10P120A520/4LS3855

EP type number : 0 411 829 709

Governor

Governer design. : RQV300...1000PA838

Governer no. : 0 421 813 585

Cust. part No. : 2-7779

Customer-spec. information

Customer : MAN

: D2840LF/460 Motor

Power KW : 338.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00 x length mm : 1000 **REMARKS**

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar $: \leftarrow 1.0$

Prestroke mm : 3.95 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 10- 9- 4- 1- 8

: - 7- 6- 3- 5 : - 2

Phasing : 0-45-72-117-144-189

: -216-261-288-333

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 10

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 10.55 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 205.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

: 9.0

: 300.0 Rated speed rum

Rack travel in mm : 5.30

Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s.: +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s.: 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300

guide sleeve

: 1.20 travel mm : +- 0.20 Tolerance mm

Rated speed rpm : 500

guide sleeve

: 3.30 travel mm : **+-** 0.20 Tolerance mm

Rated speed rpm : 850

guide sleeve

: 6.75 travel mm : + 0.15Tolerance mm

: 1000 Rated speed rpm

guide sleeve

: 7.80 travel mm : + -0.10Tolerance mm

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 1025 Rack travel in mm : 16.50 Tolerance mm : + 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000

Aneroid pressure

hPa : 1000

Del. quantity

cm3/1000 strokes : 205.00

Tolerance

cm3/1000 strokes : +-1.00

Check tolerance

cm3/1000s. : + 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 120.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 16.5 Rated speed rpm : 1025

rack travel mm : 9.50 Rated speed rpm : 1045.0 Tolerance $1/\min$: +- 5.0

rack travel mm : 4.00 Rated speed rpm : 1120.0 Tolerance $1/\min$: \leftarrow 15.0

rack travel mm : 0.50 : +- 0.50 Tolerance mm Rated speed rpm : 1250

LOW IDLE

control lever

position degree : 84.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 300 rack travel mm : 5.3 Rated speed rpm : 100

CRT mm min. : 6.80

Testing:

Rated speed rpm : 300 rack travel mm : 5.30 Tolerance mm : + 0.10

rack travel mm : 2.00

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 10.55 Tolerance mm : +- 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 10.55
Tolerance mm : + 0.05

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 9.30 Tolerance mm : + 0.10

Pressure hPa : 380 rack travel mm : 9.65 Tolerance mm : + 0.05

Pressure hPa : 500 rack travel mm : 10.20 Tolerance mm : ← 0.10

Start interlock

Rated speed rpm : 230

Check

speed 1/min : 250

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 145.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +-4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 200.00

Tolerance

cm3/1000 strokes : + 10.00

Check tolerance

cm3/1000s. : +- 14.00

LOW IDLE

Rated speed rpm : 300.0

Rack travel in mm : 5.30
Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000S. : +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.11.89 : ISO-4113

Combination No. : 0 401 876 333

Injection pump

Pump designation : PE6P120A320RS257 EP type number : 0 411 826 075

Governor

Governer design. : RSV250...1100POA533

Governer no. : 0 421 833 274

Cust. part No. : 181340

Customer-spec. information

Customer

: ENASA

Motor Power KW

: 96 T1AO : 213.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

: 40.0

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

: 208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 2.85

Tolerance mm

: +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

Phasing

: 0-60-120-180-240

: -300 : +- 0.50

Tolerance Check

tolerance *NW

: +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 10.15

Tolerance mm : +-0.05

Del. quantity

cm3/1000 strokes : 187.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

: +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

Rated speed rpm : 250.0

Rack travel in mm: 5.80 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION FUMP

WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : -3 Rated speed rpm : 800

Rack travel in mm: 0.50

Tolerance mm : +- 0.20

governor spring

pre-tension

click setting x : 3.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050

Del. quantity

cm3/1000 strokes : 187.00

Tolerance

cm3/1000 strokes : $\leftarrow 1.00$

Check tolerance

cm3/1000s. : +- 4.00

Spreed Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.: 9.0 CONTROL LEVER

control lever

position degree : 94.0

tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 0.5

Rated speed rpm : 800

: 9.10 rack travel mm

Rated speed rpm : 1145.0 Tolerance 1/min : +- 5.0

rack travel mm : 4.00

Rated speed rpm : 1185.0

Tolerance $1/\min$: \leftarrow 15.0

rack travel mm : 4.00

Rated speed rpm : 1185.0

rack travel mm : 0.85

: +- 0.55 Tolerance mm

Raced speed rpm : 1350

LOW IDLE

control lever

position degree : 69.0

tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm

rack travel mm : 5.3

Rated speed rpm : 100

CRT mm min. : 19.50

Testing:

: 250 Rated speed rpm

rack travel mm : 5.80

Tolerance mm : +-0.10

rack travel mm : 2.00

Rated speed rpm : 360.0

Tolerance 1/min : +- 30.0

TORQUE CONTROL

Dimension a mm : 2.90
Rated speed rpm : 1050
rack travel mm : 10.15
Tolerance mm : + 0.05

Rated speed rpm : 450 rack travel mm : 10.15 Tolerance mm : +- 0.05

Rated speed rpm : 300 rack travel mm : 11.60 Tolerance mm : +- 0.30

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 150.00

Tolerance

cm3/1000 strokes : + 10.00

Check tolerance

cm3/1000s. : $\leftarrow 14.00$

LOW IDLE

Rated speed rpm : 250.0

Rack travel in mm : 5.80
Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : \leftarrow 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.01.90 : ISO-4113

Combination No. : 0 402 036 069

Injection pump

Pump designation : PES6P120A720/3LS470

: -3

EP type number : 0 412 026 051

Governor

Governer design. : RQ300/1100PA579-2

Governer no. : 0 421 801 402

Cust. part No. : 2-7878

Customer-spec. information

Customer : MAN

Motor

: D2866LUL/290

Power KW

: 213.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

: 40.0

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure par : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 6-2-4-1-5

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 10.65

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 184.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

: +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

: 9.0

Rated speed rom : 300.0

Rack travel in mm: 5.10

Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : +-3.00

Check tolerance

cm3/1000s. : +- 6.00

Spread

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : 45 Rated speed rpm : 600

Rack travel in mm: 20.00 Tolerance mm : +-0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

: 750 Rated speed rom

Aneroid pressure

hPa : 1000

Del. quantity

cm3/1000 strokes : 184.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000S.: 9.0 RATED SPEED

rack travel mm : 20.0

Rated speed rpm : 600

rack travel mm : 9.60

Rated speed rpm : 1152.5

Tolerance 1/min : +- 7.5

rack travel mm

: 4.00

Rated speed rpm : 1195.0

Tolerance 1/min : +- 15.0

rack travel mm

: 0.50

Tolerance mm

: +- 0.50

Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 73.0

tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 300

: 5.1 rack travel mm

Rated speed rpm : 100

CRT mm min. : 6.60

Testing:

Rated speed rpm

: 300

rack travel mm : 5.10

Tolerance mm

: +- 0.10

rack travel mm

: 2.00

Rated speed rpm : 365.0

Tolerance 1/min

: +- 20.0

TORQUE CONTROL

Dimension a mm : 0.20

Rated speed rpm : 750

rack travel mm : 10.65

Tolerance mm

: +- 0.05

Rated speed rpm : 750

rack travel mm : 11.30

Tolerance mm

: +- 0.10

Rated speed rpm : 925

rack travel mm

: 10.85

Tolerance mm

: +- 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa

: 1000 rack travel mm : 10.65 Tolerance mm : + 0.05

MEASUREMENT

Rated speed rpm : 500

: 8.90 rack travel mm Tolerance mm : + 0.10

Pressure hPa : 210 rack travel mm : 9.15 Tolerance mm : + - 0.05

Pressure hPa : 375 : 10.05 rack travel mm : + 0.15Tolerance mm

Start interlock

Rated speed rpm : 190

Check

speed 1/min : 210

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 1000 hPa : 1100

Rated speed rpm

Del. quantity

cm3/1000 strokes : 193.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : + 6.00

Aneroid pressure

hPa : 1000 Rated speed rpm : 650

Del. quantity

cm3/1000 strokes : 177.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

: 500 Rated speed rpm

Del. quantity cm3/1000 strokes : 120.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : + 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 235.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s. : +- 14.00

LOW IDLE

Rated speed rpm : 300.0

Rack travel in mm : 5.10 Tolerance mm : + - 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : + 6.00

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15,12,82 : ISO-4113

Combination No. : 0 402 036 079

Injection pump

Pump designation : PES6P12UA72U/3LS47U

: -2 EP type number

: 0 412 026 050

Governor

Governor design. : RGV300...1100PA876

Governer no.

: 0 421 813 661

Cust. part No. : 2-7761

Customer-spec. information

Customer : MAN

Motor

: D2866LF/290

Power KW

: 213.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

: 40.0

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 075

Outside diameter : 8.00

x inside diameter: 3.00

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0

Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.35

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 6-2-4-1-5

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Barrel no.

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 10.35

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 184.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s.

: +- 4.00

L19

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

: 300.0 Rated speed rpm

Rack travel in mm: 5.10

: +- 0.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300

guide sleeve

: 1.85 travel mm Tolerance mm : + - 0.15

Rated speed rpm : 850

guide sleeve

: 6.10 travel mm

Tolerance mm : + 0.10

: 1100

Rated speed rpm

guide sleeve

travel mm : 8.20 : + - 0.10Tolerance mm

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 1190

Rack travel in mm : 16.50 Tolerance mm : +- 1.30 : 750

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm Aneroid pressure

hPa : 1000

Del. quantity

cm3/1000 strokes : 184.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 120.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 16.5 : 1190 Rated speed rpm

: 8.70 rack travel mm Rated speed rpm : 1145.0 Tolerance 1/min : +- 5.0

rack travel mm : 4.00 Rated speed rpm : 1220.0 Tolerance 1/min : +- 15.0

rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 86.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

: 300 Rated speed rpm rack travel mm : 5.1

Rated speed rpm : 100

CRT mm min. : 6.60

Testing:

: 300 Rated speed rpm rack travel mm : 5.10 Tolerance mm : +- 0.10

TORQUE CONTROL

Dimension a mm : 0.80 Rated speed rpm : 750 rack travel mm : 10.35 Tolerance mm : +- 0.05

: 1100 Rated speed rpm rack travel mm : 9.85 : +- 0.05 Tolerance mm

: 925 Rated speed rpm rack travel mm : 10.15 Tolerance mm : +- 0.05

: 975 Rated speed rpm rack travel mm : 9.90 : + 0.10Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 10.35 : +- 0.05 Tolerance mm

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 9.10 Tolerance mm : **←** 0.10

Pressure hPa : 85 : 9.45 rack travel mm Tolerance mm : +- 0.05

Pressure hPa : 160 rack travel mm : 10.00 : +- 0.20 Tolerance mm

Start interlock

Rated speed rpm : 220

Check

speed 1/min : 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 1000 Rated speed rpm : 1100

Del. quantity

cm3/1000 strokes : 180.00

Tolerance

cm3/1000 strokes : \leftarrow 2.00

Check tolerance

cm3/1000s.: +- 5.00

Aneroid pressure

: 1000 hPa Rated speed rpm : 650

Del. quantity

cm3/1000 strokes : 177.00

Tolerance cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000S.: +- 6.00

Aneroid pressure

: 60 Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 163.00

Tolerance

cm3/1000 strokes : +- 6.00

Check tolerance

cm3/1000s. : +- 9.00

: 500 Rated speed rpm

Del. quantity

cm3/1000 strokes : 133.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 235.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s. : +- 14.00

L21

LOW IDLE

Rated speed rpm : 300.0

Rack travel in mm : 5.10 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 20.00

Tolerance

cm3/1000 strokes : +3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12.01.90 : ISO-4113

Combination No. : 0 402 036 080

Injection pump

Pump designation : PES6P120A720/3LS470

: -2

EP type number : 0 412 026 050

Governor

Governer design. : RQ300/1100PA813-11

Governer no. : 0 421 801 514

Cust. part No. : 2-7756

Customer-spec. information Customer : MAN

Motor

: D2866LF

Power KW

: 243.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

: 40.0

Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde assembly

: 1 688 901 019

Opening pressure

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 6.00

x inside diameter: 1.00

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0

Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : $\leftarrow 0.10$

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 6-2-4-1-5

Phasing

: 0-60-120-180-240

: -300

Tolerance

: + 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 11.15

Tolerance mm

: **←** 0.05

Del. quantity

cm3/1000 strokes : 203.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

: +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

: 9.0

Rated speed rpm : 300.0

Rack travel in mm : 4.80

Tolerance mm : + 0.19

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : -- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : 108 Rated speed rpm : 600

Rack travel in mm : 20.00

Tolerance mm : + 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 750

Aneroid pressure

hPa : 1000

Del. quantity

cm3/1000 strokes : 203.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

: +- 4.00 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.: 9.0 RATED SPEED

rack travel mm : 20.0

Rated speed rpm : 600

: 9.70 rack travel mm

Rated speed rpm : 1152.5 Tolerance 1/min : +- 7.5

rack travel mm : 4.00

Rated speed rpm : 1200.0

Tolerance 1/min : + 15.0

rack travel mm : 0.50

Tolerance mm : +- 0.50

Rated speed rpm : 1300

LOW IDLE

control lever

position degree : 74.0

tolerance degree : +- 4.0

Setting point w/out bumper spring

Pated speed rpm : 300 rack travel mm : 4.8

Rated speed rpm : 100

CRT mm min. : 6.30

Testing:

Rated speed rpm : 300 rack travel mm : 4.80

Tolerance mm : + 0.10

rack travel mm : 2.00

Rated speed rpm : 360.0

Tolerance 1/min : ← 20.0

TORQUE CONTROL

Dimension a mm : 0.50

Rated speed rpm : 750

rack travel mm : 11.15

Tolerance mm : +- 0.05

Rated speed rpm : 750

rack travel mm : 12.05

Tolerance mm : +- 0.15

Rated speed rpm : 875 rack travel mm : 11.90

L24

: +- 0.10 Tolerance mm

Rated speed rpm : 950 rack travel mm : 11.35

Tolerance mm : + 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1000 : 11.15 rack travel mm

: +- 0.05 Tolerance mm

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 9.00 Tolerance mm : + 0.10

Pressure hPa : 85 : 9.35 rack travel mm Tolerance mm : +- 0.05

Pressure hPa : 280 : 10.70 rack travel mm Tolerance mm : +- 0.20

Start interlock

Rated speed rpm : 220

Check

speed 1/min : 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 1000 hPa Rated speed rpm : 1100

Del. quantity

cm3/1000 strokes : 207.00

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance

: +- 5.00 cm3/1000s.

Aneroid pressure

: 1000 hPa Rated speed rpm : 650

Del. quantity

cm3/1000 strokes : 201.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Aneroid pressure

: 80 : 500 Rated speed rpm

Del. quantity

cm3/1000 strokes : 190.00

Tolerance

cm3/1000 strokes : +- 6.00

Check tolerance

cm3/1000s. : + 9.00

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 133.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : + 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 235.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s.: +- 14.00

LOW IDLE

Rated speed rpm : 300.0

Rack travel in mm : 4.80 Tolerance mm : **←** 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

: 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 02.01.90

Test oil

: ISO-4113

Combination No. : 0 402 046 208

Injection pump

Pump designation : PES6P120A720LS388

EP type number : 0 412 026 030

Governor

Governer design. : RQ250/1100PA509

Governer no. : 0 421 801 117

Cust. part No. : 2-7083

Customer-spec. information

Customer : MAN

Motor

: D2566MKF

Power KW

: 206.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

: 40.0

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.05

Tolerance mm

: +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order

: 6-2-4-1-5

Phasing

: 0-60-120-180-240

: -300 : + 0.50

Tolerance

Check tolerance "NW

: + 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 11.45

Tolerance mm : $\leftarrow 0.05$

Del. quantity

cm3/1000 strokes : 179.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

: +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

: 9.0

Rated speed rpm : 250.0

Rack travel in mm : 6.30

Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : +-6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : -2 Rated speed rpm : 600

Rack travel in mm : 20.00

Tolerance mm : +- 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 750

Aneroid pressure

hPa : 700

Del. quantity

cm3/1000 strokes : 179.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

RATED SPEED

rack travel mm : 20.0

Rated speed rpm : 600

rack travel mm : 9.20 Rated speed rpm : 1152.5

Tolerance 1/min : +- 7.5

rack travel mm : 4.00

Rated speed rpm : 1195.0

Tolerance 1/min : +- 15.0

rack travel mm : 0.50

Tolerance mm : +- 0.50

Rated speed rpm : 1400

LOW IDLE

control lever

position degree : 13.0

tolerance degree : +- 4.0

Setting point w/out bumper spring

: 7.80

Rated speed rpm : 250 rack travel mm : 6.3

Rated speed rpm : 100

Testing:

CRT mm min.

Rated speed rpm : 250 rack travel mm : 6.30

Tolerance mm : + 0.10

rack travel mm : 2.00

Rated speed rpm : 355.0

Tolerance 1/min : + 20.0

TORQUE CONTROL

Dimension a mm : 0.50

Rated speed rpm : 750

rack travel mm : 11.45

Tolerance mm : +- 0.05

Rated speed rpm : 1100

rack travel mm : 10.25 Tolerance mm : + 0.05

225

Rated speed rpm : 875 rack travel mm : 11.20

Tolerance mm : +- 0.10

Rated speed rpm : 985 rack travel mm : 10.55 Tolerance mm : + 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 700 : 11.45 rack travel mm Tolerance mm : +- 0.05

MEASUREMENT

Rated speed rpm : 500

: 9.25 rack travel mm : + 0.05Tolerance mm

Pressure hPa : 310 rack travel mm : 10.35 Tolerance mm : + 0.05

: 430 Pressure hPa rack travel mm : 11.00 : + - 0.10Tolerance mm

Start inverlock

Rated speed rpm : 170

Check

speed 1/min : 190

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 700 hPa : 1100 Rated speed rom

Del. quantity

cm3/1000 strokes : 163.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s.: +- 6.00

Aneroid pressure

: 700 hPa Rated speed rpm : 650 Del. quantity

cm3/1000 strokes : 174.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : + -6.00

Aneroid pressure

: 10 Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 134.00

Tolerance

cm3/1000 strokes : \leftarrow 3.00

Check tolerance

cm3/1000s. : + 6.00

: 500 Rated speed rpm

Del. quantity

cm3/1000 strokes : 105.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 215.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s.: +- 14.00

LOW IDLE

Rated speed rpm : 250.0

Rack travel in mm: 6.30 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : + 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.01.90 : ISO-4113

Combination No. : 0 402 046 209

Injection pump

Pump designation : PES6P120A720LS388

EP type number : 0 412 026 030

Governor

Governer design. : RQ250/1100PA509

Governer no. : 0 421 801 117

Cust. part No. : 2-7066

Customer-spec. information

Customer : MAN

Motor

: D2566MK

Power KW

: 206.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar : +1.5

Test Lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : +1.0

Prestroke mm : 3.05 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : ← 1.50

Firing order : 6-2-4-1-5

: - 3

Phasing

: 0-60-120-180-240

: -300

Tolerance

: **←** 0.50

Check

tolerance 'NW

: + 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 11.45

Tolerance mm : +-0.05

Del. quantity

cm3/1000 strokes : 179.00

Tolerance

cm3/1000 strokes : +-1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

Rated speed rpm : 250.0

Rack travel in mm: 6.30 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : \leftarrow 3.00

Check tolerance

cm3/1000s.: + 6.00

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cri3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : -2 Rated speed rom : 600

Rack travel in mm: 20.00 Tolerance mm : +-0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 750

Aneroid pressure

hPa : 700

Del. quantity

cm3/1000 strokes : 179.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0 RATED SPEED

rack travel mm : 20.0 Rated speed rpm : 600

: 9.20 rack travel mm Rated speed rpm : 1152.5 Tolerance $1/\min$: + 7.5

rack travel mm : 4.00 Rated speed rpm : 1195.0

Tolerance 1/min : +- 15.0

rack travel mm : 0.50 Tolerance mm : + 0.50Rated speed rpm : 1400

LOW IDLE

control lever

position degree : 13.0 tolerance degree : +- 4.0

Setting point whoat bumper spring

Rated speed rpm : 250 rack travel mm : 6.3

Rated speed rpm : 100

CRT mm min. : 7.20

Testing:

Rated speed rpm : 250 rack travel mm : 6.30 Tolerance mm : + 0.10

rack travel mm : 2.00 Rated speed rpm : 355.0 Tolerance 1/min : + 20.0

TORQUE CONTROL

Dimension a mm : 0.50 Rated speed rpm : 750 rack travel mm : 11.45 : +- 0.05Tolerance mm

Rated speed rpm : 1100 rack travel mm : 10.25 Tolerance mm : +- 0.05

Rated speed rpm : 875 rack travel mm : 11.20 Tolerance mm : +-0.10

Rated speed rpm : 985 rack travel mm : 10.55 Tolerance mm : +- 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 11.45
Tolerance mm : +- 0.05

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 9.25 Tolerance mm : +- 0.05

Pressure hPa : 310
rack travel mm : 10.35
Tolerance mm : + 0.05

Pressure hPa : 430 rack travel mm : 11.00 Tolerance mm : +- 0.10

Start interlock

Rated speed rpm : 170

Check

speed 1/min : 190

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 700 Rated speed rpm : 1100

Del. quantity

cm3/1000 strokes : 163.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : $\leftarrow 6.00$

Aneroid pressure

hPa : 700 Rated speed rpm : 650 Del. quantity

cm3/1000 strokes : 174.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : +- 6.00

Aneroid pressure

hPa : 10 Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 134.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : +- 6.00

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 105.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 215.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s. : +- 14.00

LOW IDLE

Rated speed rpm : 250.0

Rack travel in mm : 6.30
Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : $\leftarrow 6.00$

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.01.90 Test oil : ISO-4113

Combination No. : 0 402 046 287

Injection pump

Pump designation : PES6P100A720LS471 EP type number : 0 412 006 034

Governor

Governer design. : RQ250/1100PA685 Governer no. : 0 421 801 227

Cust. part No. : 2-7454

Customer—spec. information

Customer : MAN

Motor : D2566UH/200

Power KW : 147.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter : 3.00
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.15Tolerance mm : +0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 6-2-4-1-5

: - 3

Phasing : 0-60-120-180-240

: -300

Tolerance : $\leftarrow 0.50$

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 12.35
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 95.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 3.00

Spreed

MO7

Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s.: 6.0 Rated speed rpm : 250.0 Reck travel in mm : 5.00 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 15.00 Tolerance cm3/1000 strokes : + 3.00Check tolerance cm3/1000s. : +- 5.50 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s.: 5.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 600 Rack travel in mm: 16.00 Tolerance mm : +-0.40FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 95.00 Tolerance cm3/1000 strokes : +- 1.00 Check tolerance cm3/1000S. : +- 3.00 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0

Rated speed rpm : 600 rack travel mm : 11.20 Rated speed rpm : 1152.5 Tolerance $1/\min$: +- 7.5 rack travel mm : 4.00 : 1230.0 Rated speed rpm Tolerance 1/min : +- 15.0 rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1350 LOW IDLE control lever position degree : 9.0 tolerance degree : +- 4.0 Setting point w/out bumper spring : 250 Rated speed rpm rack travel mm Rated speed rpm : 100 CRT mm min. : 6.50 Testing: Rated speed rpm : 250 rack travel mm : 5.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 360.0 Tolerance $1/\min$: \leftarrow 20.0 TORQUE CONTROL Rated speed rpm : 750 rack travel mm : 12.35 Tolerance mm : +- 0.05 Rated speed rpm : 1100 rack travel mm : 12.30 Tolerance mm : +- 0.10 FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 500

RATED SPEED

rack travel mm : 16.0

Del. quantity

cm3/1000 strokes : 86.50

Tolerance

cm3/1000 strokes : +- 1.50

Check tolerance

cm3/1000S. : +- 4.00

Rated speed rpm : 1100

Del. quantity

cm3/1000 strokes : 102.00

Tolerance

cm3/1000 strokes : + 2.00

Check tolerance

cm3/1000s. : +-4.50

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1090 strokes : 125.00

Tolerance

cm3/1000 strokes : + 10.00

Check tolerance

cm3/1000s. : +- 14.00

LOW IDLE

Rated speed rpm : 250.0

Rack travel in mm : 5.00

Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 15.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000S. : +- 5.50

Spreed

Tolerance

cm3/1000 strokes : 3.0

de strokes . S.

Check tolerance

cm3/1000s. : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15,12,89 : ISO-4113

Combination No. : 0 402 046 322

Injection pump

Pump designation : PES6P110A720LS375 EP type number : 0 412 016 053

Governor

Governer design. : RQ250/1100PA658-17

Governer no. : 0 421 801 309

Cust. part No. : 2-7588

Customer-spec. information

Customer : MAN

Motor

: D2566 MTUH/265

Power KW

: 195.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter: 3.00

x length mm : 600

M10

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 6-2-4-1-5

: - 3

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.75

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 144.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

: +- 3.50

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

Rated speed rpm : 250.0

Rack travel in mm : 7.00 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 13.00

Tolerance

cm3/1000 strokes : +3.00

Check tolerance

cm3/1000s. : +- 5.50

Spreed Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : 45 Rated speed rpm : 600

Rack travel in mm : 20.00

Tolerance mm : +- 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1100

Aneroid pressure

hPa : 700

Del. quantity

cm3/1000 strokes : 144.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : +- 3.50

Spreed Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

RATED SPEED

rack travel mm : 20.0 Rated speed rpm : 600

rack travel mm : 11.70
Rated speed rpm : 1152.5
Tolerance 1/min : +- 7.5

rack travel mm : 4.00
Rated speed rpm : 1200.0
Tolerance 1/min : ← 15.0

rack travel mm : 0.50
Tolerance mm : → 0.50
Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 13.0 tolerance degree : +- 4.0

Setting point w/our bumper spring

Rated speed rpm : 250 rack travel mm : 7.0

Rated speed rpm : 100

CRT mm min. : 8.50

Testing:

Rated speed rpm : 250 rack travel mm : 7.00 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 380.0
Tolerance 1/min : +- 20.0

TORQUE CONTROL

Dimension a mm : 0.40
Rated speed rpm : 1100
rack travel mm : 11.75

Tolerance mm : +- 0.05

Rated speed rpm : 1100 rack travel mm : 11.75 Tolerance mm : +- 0.05

Rated speed rpm : 810 rack travel mm : 12.60

Tolerance mm : +- 0.10

Rated speed rpm : 950 rack travel mm : 12.10 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 12.65
Tolerance nim : -- 0.05

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 10.85
Tolerance mm : + 0.05

Pressure hPa : 200
rack travel mm : 11.45
Tolerance mm : + 0.05

Pressure hPa : 310 rack travel mm : 12.10 Tolerance mm : +- 0.20

Start interlock

Rated speed rpm : 170

Check

speed 1/min : 190

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 700 Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 158.00

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance

cm3/1000s. : +- 5.00

Aneroid pressure

hPa : 200 Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 125.00

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance

cm3/1000s. : +- 5.00

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 113.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 3.50

STARTING FUEL DELIVERY

Rated speed rpm : 100

De! quantity

cm3/1000 strokes : 235.00

Tolerance

cm3/1000 strokes : + 10.00

Check tolerance

cm3/1000s. : +- 14.00

LOW IDLE

Rated speed rpm : 250.0

Rack travel in mm : 7.00 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 13.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 5.50

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.02.90 Test oil : ISO-4113

Combination No. : 0 402 046 338

Injection pump

Pump designation : PES6P120A320RS522 EP type number : 0 412 026 057

Governor

Governer design. : RQV275...1000PA912

Governer no. : 0 421 813 744

Cust. part No. :

Customer—spec. information

Customer : RVI

Motor : MIDRO62045L

Power KW : 176.5

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter : 3.00 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85Tolerance mm : +0.05

Check

tolerance mm : ⊹- 0.10

Rack travel in mm : 18.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \div 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Del. quantity

cm3/100G strokes : 171.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : \leftarrow 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

: 9.0

Rated speed rpm : 275.0

Rack travel in mm: 6.30

Tolerance mm : +- 0.20

Del. quantity cm3/1000 strokes : 43.90

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 275

guide sleeve

travel mm : 0.80 Tolerance mm : +- 0.10

Rated speed rpm : 500

guide sleeve

: 3.80 travel mm : ← 0.30 Tolerance mm

Rated speed rpm : 750

guide sleeve

travel mm : 5.50 Tolerance mm : +- 0.20

Rated speed rpm : 1000

guide steeve

travel mm : 7.20 : +- 0.10 Tolerance mm

: 1400 Rated speed rpm

guide sleeve

: 11.50 travel mm Tolerance mm : +- 0.50

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 1130 Rack travel in mm: 16.50 Tolerance mm : +-1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000

Aneroid pressure

hPa : 1000

Del. quantity

cm3/1000 strokes : 171.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 117.0

tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 16.5 Rated speed rpm : 1130

rack travel mm : -1.00 Rated speed rpm : 1080.0 Tolerance 1/min : +- 5.0

rack travel mm : -8.00 Rated speed rpm : 1215.0 Tolerance 1/min : +- 15.0

rack travel mm : -11.50 : +- 0.50 Tolerance mm Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 67.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 275 rack travel mm : 6.3 Rated speed rpm : 100

Testina:

Rated speed rpm : 275 rack travel mm : 6.30 Tolerance mm : + 0.20

Rated speed rpm : 200

CRT mm max. : -4.60

TORQUE CONTROL

Rated speed rpm : 1000

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1000

MEASUREMENT

Rated speed rpm : 500

rack travel mm : -1.75 Tolerance mm : + 0.15

Pressure hPa : 240 rack travel mm : -0.35 Tolerance mm : + 0.05

Pressure hPa : 140 rack travel mm : -1.25 Tolerance mm : + 0.15

Start interlock

Rated speed rpm : 195

Check

speed 1/min : 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1000 Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 155.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Aneroid pressure

hPa : 1000 Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 65.00

Tolerance

cm3/1000 strokes : +- 3.00

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 98.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 145.00

Tolerance

cm3/1000 strokes : +- 15.00

Check tolerance

cm3/1000s. : +- 15.00

LOW IDLE

Rated speed rpm : 275.0

Rack travel in mm : 6.30 Tolerance mm : +- 0.20

Del. quantity

cm3/1000 strokes : 43.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 05.03.90 : ISO-4113

Combination No. : 0 402 046 784A

Injection pump

Fump designation : PES6P120A320RS3139 EP type number : 0 412 026 718

Governor

Governer design. : RQV275...1000PA728

: -2

Governer no.

: U 421 813 599

Cust. part No. :

Customer-spec. information

Customer : RVI

Motor

: MIDR 062045 E

Power KW

: 236.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

: 40.0

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.00

x inside diameter: 2.00

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.55
Tolerance mm : +- 0.

: +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +-1.50

Firing order : 1-5-3-6-2

Phasing

: 0-60-120-180-240

: -300

Tolerance

: + 0.50

Check

tolerance °NW

: +- 0.75

Beginning of delivery differende

betw. rack trav.

THE

: 10.50

Tolerance mm

: +- 0.50

BASIC SETTING

Rated speed rpm : 1000

Del. quantity

cm3/1000 strokes : 160.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s.

: +- 4.00

Spreed

M17

Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275.0 Rack travel in mm: 5.70 : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 26.00 Tolerance cm3/1000 strokes : +- 3.00 Check tolerance cm3/1000s.: +- 6.00 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.00 : +- 0.10 Tolerance mm Rated speed rpm : 450 guide sleeve travel mm : 3.50 Tolerance mm : +- 0.20 Rated speed rpm : 800 guide sleeve travel mm : 5.80 Tolerance mm : +- 0.20 Rated speed rpm : 1000 guide sleeve travel mm : 7.10

Tolerance mm : + - 0.10GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1170

Rack travel in mm: 16.50

Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure : 1000 Del. quantity cm3/1000 strokes : 160.00 Tolerance cm3/1000 strokes : + 1.00Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 119.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 16.5 Rated speed rpm : 1170 rack travel mm : -1.00 Rated speed rpm : 1070.0 Tolerance $1/\min$: +- 5.0 rack travel mm : -7.60 Rated speed rpm : 1195.0 Tolerance 1/min : +- 15.0 rack travel mm : -10.80 Tolerance mm : + 0.20Rated speed rpm : 1300

LOW IDLE

control lever

position degree : 68.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 5.7 rack travel mm

Testing:

Rated speed rpm : 275
rack travel mm : 5.70
Tolerance mm : +- 0.10

Rated speed rpm : 200

CRT mm max. : -4.00

TORQUE CONTROL

Rated speed rpm : 1000

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1000

MEASUREMENT

Rated speed rpm : 500

rack travel mm : -2.80 Tolerance mm : +- 0.10

Pressure hPa : 320
rack travel mm : -0.65
Tolerance mm : + 0.05

Pressure hPa : 160
rack travel mm : -2.00
Tolerance mm : + 0.10

Start interlock

Rated speed rpm : 195

Check

speed 1/min : 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1000 Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 185.00

Tolerance

cm3/1000 strokes : +-3.00

Check tolerance

cm3/1000s. : +- 6.00

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 109.00

Tolerance

cm3/1000 strokes : $\leftarrow 1.00$

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 175.00

Tolerance

cm3/1000 strokes : + 15.00

Check tolerance

cm3/1000s. : \leftarrow 19.00

LOW IDLE

Rated speed rpm : 275.0

Rack travel in mm : 5.70 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 26.00

Tolerance

cm3/1000 strokes : \leftarrow 3.00

Check tolerance

cm3/1900s. : $\leftarrow 6.00$

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.02.90 Test oil : ISO-4113

Combination No. : 0 402 046 791A

Injection pump

Pump designation : PES6P12OA32ORS3139 EP type number : 0 412 026 718

Governor

Governer design. : RQV275...950PA728-4

Governer no. : 0 421 813 673

Cust. part No. :

Customer—spec. information

Customer : RVI

Motor : MIDR 063540 H

Power KW : 264.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40.0 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter : 3.00 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm: : 3.55
Tolerance mm : +- 0.05

Check

tolerance mm : $\leftarrow 0.10$

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5- 3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Beginning of delivery differende

betw. rack trav.

mm : 10.50 Tolerance mm : +- 0.50

BASIC SETTING

Rated speed rpm : 600

Del quantity

cm3/1000 strokes : 211.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275.0 Rack travel in mm: 7.70 Tolerance mm : + 0.20Del. quantity cm3/1000 strokes : 26.00 Tolerance cm3/1000 strokes : + 3.00Check tolerance cm3/1000s.: +- 6.00 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL : 275 Rated speed rom guide steeve : 1.50 travel mm Tolerance mm : **←** 0.20 Rated speed rom : 450 guide sleeve travel mm : 3.50 Tolerance mm : +- 0.20 Rated speed rpm : 800 guide sleeve : 5.80 travel mm Tolerance mm : + 0.20Rated speed rpm : 950 quide sleeve travel mm : 6.80 : +- 0.10 Tolerance mm

: 1500

: 11.50

: + 0.50

control lever position degree : -1 Rated speed rpm : 1125 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure : 1000 Del. quantity cm3/1000 strokes : 211.00 Tolerance cm3/1000 strokes : +- 1.00 Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 16.5 Rated speed rpm : 1125 rack travel mm : -1.00 Rated speed rpm : 1020.0 Tolerance 1/min : +- 5.0 : -9.30 rack travel mm Rated speed rpm : 1175.0 Tolerance 1/min : +- 15.0 rack travel mm : -12.65 : **←** 0.35 Tolerance mm Rated speed rpm : 1250

LOW IDLE

control lever

position degree : 69.0 tolerance degree : +- 4.0

Rated speed rpm guide sleeve

GUIDE SLEEVE POSITION

travel mm

Tolerance mm

Setting point w/out bumper spring

Rated speed rpm : 275 rack travel mm : 7.7

Testing:

Rated speed rpm : 275
rack travel mm : 7.70
Tolerance mm : + 0.20

Rated speed rpm : 200

CRT mm max. : -6.10

TORQUE CONTROL

Rated speed rpm : 600

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1000

MEASUREMENT

Rated speed rpm : 500

rack travel mm : -3.70 Tolerance mm : +- 0.20

Pressure hPa : 660 rack travel mm : -0.65 Tolerance mm : + 0.05

Pressure hPa : 200 rack travel mm : -3.00 Tolerance mm : +- 0.10

Start interlock

Rated speed rpm : 195

Check

speed 1/min : 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1000 Rated speed rpm : 950 Del. quantity

cm3/1000 strokes : 213.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : +- 6.00

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 116.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 89.00

Tolerance

cm3/1000 strokes : + 71.00

Check tolerance

cm3/1000s. : +- 67.00

LOW IDLE

Rated speed rpm : 275.0

Rack travel in mm : 7.70 Tolerance mm : ← 0.20

Del. quantity

cm3/1000 strokes : 26.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : $\leftarrow 6.00$

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 01.02.90

Test oil

: ISO-4113

combination No. : 0 402 046 791a

Injection pump

Pump designation : PES6P120A320RS3139

EP type number : 0 412 026 718

Governor

Governer design. : RQV275...950PA728-4

Governer no. : 0 421 813 678

Cust. part No. :

Customer-spec. information

Customer : RVI

: MIDR 063540 H Motor

Power KW

: 264.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

: 40.0 : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : $\leftarrow 1.5$

Test lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter : 3.00

x length mm : 600

M23

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : +- 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

Beginning of delivery differende

betw. rack trav.

: 10.50

Tolerance mm : + 0.50

BASIC SETTING

Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 211.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

: +- 4.00

Spreed

Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275.0 Rack travel in mm: 7.70 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 26.00 Tolerance cm3/1000 strokes : + 3.00Check tolerance cm3/1000s. : +- 6.00 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 quide sleeve travel mm : 1.50 Tolerance mm : + 0.20Rated speed rpm : 450 guide sleeve travel mm : 3.50 Tolerance mm : + 0.20Rated speed rpm : 800 guide sleeve travel mm : 5.80 Tolerance mm : **←** 0.20

Rated speed rpm : 950 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 : 1500 Rated speed rpm guide sleeve travel mm : 11.50 : **←** 0.50 Tolerance mm GUIDE SLEEVE POSITION

control lever position degree : -1 Rated speed rpm : 1125 Rack travel in mm: 16.50 Tolerance mm : +-1.30FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure : 1000 Del. quantity cm3/1000 strokes : 211.00 Tolerance cm3/1000 strokes : +- 1.00Check tolerance cm3/1000s. : + 4.00Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 16.5 Rated speed rpm : 1125 rack travel mm : -1.00 Rated speed rpm : 1020.0 Tolerance 1/min : +- 5.0 rack travel mm : -9.30 Rated speed rpm : 1175.0 Tolerance 1/min : +- 15.0 rack travel mm : -12.65 Tolerance mm : +- 0.35 Rated speed rpm : 1250

LOW IDLE

control lever

position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring

Rated speed rpm : 275 rack travel mm : 7.7

Testing:

Rated speed rpm : 275
rack travel mm : 7.70
Tolerance mm : + 0.20

Rated speed rpm : 200

CRT mm max. : -6.10

TORQUE CONTROL

Rated speed rpm : 600

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1000

MEASUREMENT

Rated speed rpm : 500

rack travel mm : -3.70 Tolerance mm : +0.20

Pressure hPa : 660 rack travel mm : -0.65 Tolerance mm : +- 0.05

Pressure hPa : 200
rack travel mm : -3.00
Tolerance mm : + 0.10

Start interlock

Rated speed rpm : 195

Check

speed 1/min : 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1000 Rated speed rpm : 950 Del. quantity

cm3/1000 strokes : 213.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s. : +- 6.00

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 116.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 89.00

Tolerance

cm3/1000 strokes : +- 71.00

Check tolerance

cm3/1000s. : +- 67.00

LOW IDLE

Rated speed rpm : 275.0

Rack travel in mm : 7.70 Tolerance mm : +- 0.20

Del. quantity

cm3/1000 strokes : 26.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : $\leftarrow 6.00$

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12.01.90 : ISO-4113

Combination No. : 0 402 046 814

Injection pump

Pump designation : PES6P120A720LS3229

EP type number : 0 412 026 733

Governor

Governer design. : RQ750PA945

Governer no. : 0 421 801 512

Cust. part No. : 2-7970

Customer-spec. information

Customer : MAN

Motor

: D2866LE

Power KW

: 230.0

TEST BENCH REQUIREMENTS

Test cil inlet

temp. °C : 40.0 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar : +1.5

Test lines : 1 680 750 075

Outside diameter : 8.00

x inside diameter: 3.00

x length mm : 1000

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REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 3.85
Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 6-2-4-1-5

: - 3

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.55

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 282.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

Spreed

: +- 4.00

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

Rated speed rpm : 300.0

Rack travel in mm: 4.40 Tolerance mm : + 0.30

Del. quantity

cm3/1000 strokes : 27.00

Tolerance

cm3/1000 strokes : + 3.00

Check tolerance

cm3/1000s.: +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 282.00

Tolerance

cm3/1000 strokes : $\leftarrow 1.00$

Check tolerance

cm3/1000s. : + 4.00

Spreed Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

LOW IDLE

Testing:

rack travel mm : 4.40 Tolerance mm : + - 0.30

TORQUE CONTROL

: 700 Rated speed rpm rack travel mm : 12.55 Tolerance mm : +- 0.05 STARTING FUEL DELIVERY

kated speed rpm : 100 rack travel mm : 12.55

Tolerance mm : +- 0.05

LOW IDLE

Rated speed rpm : 300.0

Rack travel in mm: 4.40 Tolerance mm : + - 0.30

Del. quantity

cm3/1000 strokes : 27.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s.: +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s.: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.02.90 : ISO-4113

Combination No. : 0 402 640 818

Injection pump

Pump designation : PE12P120A520LS7829

EP type number : 0 412 620 821

Governor

Governer design. : RQV250...1150PA943

Governer no. : 0 421 813 850

Cust. part No. : 3-7023

Customer-spec. information

Customer : MAN

Motor

: D2842LZE

Power KW

: 809.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : 4.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 12-1-5-9-8

: - 3- 4-11-10 : - 2- 6

Phasing

: 0-45-60-105-120-165

: -180-225-240-285

: -300-345

Tolerance

: +- 0.50

Check

tolerance °NW

: **←** 0.75

Start of delivery mark

Barrel no. : 12

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 13.85

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 305.00

Tolerance

cm3/1000 strokes : +-1.00

Check tolerance

cm3/1000s. : +- 4.00

M28

Spreed

Toterance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s : 9.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 250

guide steeve

: 1.00 travel mm

Tolerance mm : +- 0.20

Rated speed rpm : 450

guide sleeve

travel mm : 3.20

Tolerance mm : + 0.30

Rated speed rpm : 750

guide sleeve

travel mm : 5.70

: +- 0.20 Tolerance mm

: 1150 Rated speed rpm

guide sleeve

: 9.30 travel mm Tolerance mm : + 0.10

: 1400 Rated speed rpm

guide sleeve

travel mm : 13.50

Tolerance mm : +- 0.50

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 1225

Rack travel in mm : 16.50

Tolerance mm : \leftarrow 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1150

Aneroid pressure

hPa : 1300

NO1

Del. quantity

cm3/1000 strokes : 305.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 121.0

tolerance dagree : +- 4.0

RATED SPEED

rack travel mm : 16.5

Rated speed rpm : 1225

rack travel mm : 12.80 Rated speed rpm : 1195.0

Tolerance 1/min : + 5.0

rack travel mm : 4.00

Rated speed rpm : 1300.0

Tolerance $1/\min$: + 15.0

rack travel mm : 0.50

Tolerance mm : +- 0.50

Rated spead rpm : 1400

LOW IDLE

control lever

position degree : 80.0

tolerance degree : +- 2.0

Setting point w/out bumper spring

Rated speed rpm : 250

rack travel mm : 7.4

Rated speed rpm : 100

CRT mm min. : 8.90

Testing:

Rated speed rpm : 250

TORQUE CONTROL

Rated speed rpm : 1150 rack travel mm : 13.85 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1300
rack travel mm : 13.85
Tolerance mm : + 0.05

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 9.20 Tolerance mm : + 0.10

Pressure hPa : 100 rack travel mm : 9.55 Tolerance mm : + 0.05

Pressure hPa : 470
rack travel mm : 12.20
Tolerance mm : + 0.20

Start interlock

Rated speed rpm : 170

Check

speed 1/min : 190

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 150.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12.04.90 : ISO-4113

Combination No. : 0 402 640 818

Injection pump

Pump designation: PE12P12OA520LS7829

EP type number : 0 412 620 821

Governor

Governer design. : RQV300...1150PA943

Governer no. : 0 421 813 850

Cust. part No. : 3-7023

Customer-spec. information Customer : MAN

Motor

: D2842LZE

Power KW

: 809.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 067

Outside diameter : 6.00

x inside diameter: 3.00

x length mm : 1000

NO3

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : +- 1.0

Prestroke mm : 4.55 Tolerance mm : ± 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 12-1-5-9-8

: - 3- 4- 11- 10 : - 2- 6

Phasing

: 0-45-60-105-120-165

: -180-225-240-285

: -300-345

Tolerance

: +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 12

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 13.85

Tolerance mm : $\leftarrow 0.05$

Del. quantity

cm3/1000 strokes : 305.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

: 9.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 250

quide sleeve

travel mm : 1.00 Tolerance mm : + - 0.20

Rated speed rpm : 450

guide steeve

travel mm : 3.20 Tolerance mm : 4- 0.30

Rated speed rpm : 750

quide sleeve

travel mm : 5.70 Tolerance mm : +- 0.20

: 1150 Rated speed rpm

guide steeve

travel mm : 9.30 Tolerance mm : + - 0.10

Rated speed rpm : 1400

quide steeve

travel mm : 13.50 Tolerance mm : +- 0.50

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 1225

Rack travel in mm: 16.50 : +-1.30Tolerance mm

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rom : 1150

Aneroid pressure

hPa : 1300 Del. quantity

cm3/1000 strokes : 305.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 121.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 16.5 Rated speed rpm : 1225

rack travel mm : 12.80 Rated speed rpm : 1195.0 Tolerance 1/min : + 5.0

rack travel mm 4.00 Rated speed rpm : 1300.0 Tolerance $1/\min$: +15.0

rack travel mm : 0.50 Tolerance mm : + 0.50Rated speed rpm : 1400

LOW IDLE

control lever

position degree : 80.0 tolerance degree : + 2.0

Setting point w/out bumper spring

Rated speed rpm : 300 rack travel mm : 7.4

Rated speed rpm : 100

CRT mm min. : 8.90

Testing:

Rated speed rpm : 300

N04

TORQUE CONTROL

Rated speed rpm : 1150 rack travel mm : 13.85 Tolerance mm : +- 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1300
rack travel mm : 13.85
Tolerance mm : +- 0.05

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 9.20 Tolerance mm : +- 0.10

Pressure hPa : 100 rack travel mm : 9.55 Tolerance mm : + 0.05

Pressure hPa : 470
rack travel mm : 12.20
Tolerance mm : + 0.20

Start interlock

Rated speed rpm : 170

Check

speed 1/min : 190

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 150.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance

cm3/1000s. : + 4.00

Spreed

Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.11.89 : ISO-4113

Combination No. : 0 402 646 859

Injection pump

Pump designation: PE6P130A720RS7153

EP type number : 0 412 636 809

Governor

Governer design. : RQV300...950PA883

Governer no. : 0 421 813 690

Cust. part No. :

Customer-spec. information

Customer : IVECO-UNIC

Motor

: 8210.42.300

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

: 40.0

Tolerance *C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

har

: 208.5

Tolerance bar

: +- 1.5

: 1 680 750 075

Test Lines

Outside diameter : 8.00

x inside diameter: 3.00

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : +- 0

: +- 0.05

Tolerance mm Check

tolerance mm

: + 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing

: 0-60-120-180-240

: -300

Tolerance

: + - 0.50

Check

tolerance *NW

: + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm : 12.85

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 298.50

Tolerance

cm3/1000 strokes : +- 1.50

Check tolerance cm3/1000s.

: + 5.00

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

Rated speed rpm : 300.0

Rack travel in mm: 3.80

Tolerance mm : \leftarrow 0.10

Del. quantity

cm3/1000 strokes : 22.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 7.00

Spreed

Tolerance

cm3/1000 strokes : 10.0

Check tolerance

cm3/1000s. : 14.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300

guide sleeve

travel mm : 1.30 Tolerance mm : +- 0.20

Rated speed rpm : 450

guide sleeve

travel mm : 3.10 Tolerance mm : +- 0.30

Rated speed rpm : 700

guide sleeve

travel mm : 5.30 Tolerance mm : +- 0.20

: 950

Rated speed rpm

quide sleeve

travel mm : 7.20
Tolerance mm : + 0.10

GUIDE SLEEVE POSITION

control lever

position degree : -1 Rated speed rpm : 1000

Rack travel in mm: 16.50

Tolerance mm : \leftarrow 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 950

Aneroid pressure

hPa : 900

Del. quantity

cm3/1000 strokes : 298.50

Tolerance

cm3/1000 strokes : +- 1.50

Check tolerance

cm3/1000s. : +- 5.00

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

CONTROL LEVER

control lever

position degree : 119.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 16.5 Rated speed rpm : 1000

rack travel mm : 11.80
Rated speed rpm : 995.0
Tolerance 1/min : +- 5.0

rack travel mm : 4.00 Rated speed rpm : 1100.0 Tolerance 1/min : +- 15.0

rack travel mm : 4.00

rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1200

LOW IDLE

control lever

position degree : 63.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 300 rack travel mm : 3.8

N07

Rated speed rpm : 100

CRT mm min. : 6.30

Testing:

: 300 Rated speed rpm rack travel mm : 3.80 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 950 rack travel mm : 12.85 Tolerance mm : +- 0.**0**5

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 900 rack travel mm : 12.85 Tolerance mm : +- 0.05

MEASUREMENT

Rated speed rpm : 500

: 8.40 rack travel mm : + 0.10Tolerance mm

Pressure hPa : 500 rack travel mm : 11.85 Tolerance mm : +- 0.05

Pressure hPa : 380 : 9.50 rack travel mm Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 158.50

Tolerance

cm3/1000 strokes : + 1.50

Check tolerance

cm3/1000s. : **←** 5.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

Rated speed rpm : 300.0

Rack travel in mm: 3.80 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 22.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 7.00

Spreed

Tolerance

cm3/1000 strokes : 10.0

Check tolerance

cm3/1000s. : 14.0

End of test specification sheet

NO8

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.05.90 : ISO-4113

Combination No. : 0 402 646 906

Injection pump

Pump designation : PE6P120A320LS7808

EP type number : 0 412 626 816

Governor

Governer design. : RQ300/1050PA762-4

Governer no. : 0 421 801 390

Cust. part No. :

Customer-spec. information

Customer : MB-NFZ

Motor

: 0M441 LA

Power KW : 228.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : 4-2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Overflow quantity

min. l/h : 110.0 Tolerance l/h : + 10.0

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 057

Outside diameter : 6.00

x inside diameter: 3.00

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : 5.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50

: **←** 0.50

Tolerance mm

Firing order : 6-3-5-2-4

: - 1-

Phasing

: 0-60-120-180-240

: -300-360

Tolerance

: +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 14.90

Tolerance mm : $\leftarrow 0.10$

Del. quantity

cm3/1000 strokes : 221.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 300.0 Rack travel in mm: 5.70 Tolerance mm : +-0.30Del. quantity cm3/1000 strokes : 19.00 Tolerance cm3/1000 strokes : +- 3.00 Check tolerance cm3/1000s. : +- 6.00 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.: 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve : 2,35 travel mm : +- 0.15 Tolerance mm Rated speed rpm : 600 guide sleeve travel mm : 6.00 : +- 0.10 Tolerance mm Rated speed rpm : 880 guide sleeve travel mm : 6.25 : +- 0.15 Tolerance mm Rated speed rpm : 1050 guide steeve travel mm : 6.35 : + 0.15Tolerance mm

: 1110

: 6.65

GUIDE SLEEVE POSITION

control lever

position degree : 108 Rated speed rpm : 600

Rack travel in mm : 20.00 Tolerance mm : +- 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 600

Aneroid pressure

hPa : 1000

Del. quantity

cm3/1000 strokes : 221.00

Tolerance

cm3/1000 strokes : \leftarrow 1.00

Check tolerance

cm3/1000s. : +- 4.00

Spreed Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 101.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 20.0 Rated speed rpm : 600

rack travel mm : 13.80
Rated speed rpm : 1102.5
Tolerance 1/min : +- 7.5

rack travel mm : 4.00
Rated speed rpm : 1165.0
Tolerance 1/min : + 15.0

rack travel mm : 0.75
Tolerance mm : +- 0.75
Rated speed rpm : 1300

LOW IDLE

N10

Rated speed rpm

Tolerance mm : +- 0.15

guide sleeve travel mm control lever

position degree : 72.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 300 rack travel mm : 5.7

Rated speed rpm : 200

CRT mm min. : 7.70

Testing:

Rated speed rpm : 300 rack travel mm : 5.70 Tolerance mm : + 0.30

rack travel mm : 2.00
Rated speed rpm : 400.0
Tolerance 1/min : \(\to 20.0 \)

TORQUE CONTROL

Dimension a mm : 0.35
Rated speed rpm : 600
rack travel mm : 14.90
Tolerance mm : + 0.10

Rated speed rpm : 1050 rack travel mm : 14.90 Tolerance mm : +- 0.10

Rated speed rpm : 800 rack travel mm : 15.50 Tolerance mm : 10.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600

MEASUREMENT

Rated speed rpm : 600

Start interlock

Rated speed rpm : 220

Check

speed 1/min : 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1600 Rated speed rpm : 1050

Del. quantity

cm3/1000 strokes : 222.50

Tolerance

cm3/1000 strokes : + 1.50

Check tolerance

cm3/1000S. : + 4.50

Spreed

Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.

Aneroid pressure

hPa : 1600 Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 237.00

Tolerance

cm3/1000 strokes : + 2.00 Check tolerance

theck toterar

cm3/1000s. : +- 5.00

Spreed Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.00

Aneroid pressure

hPa :)

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 130.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : $\leftarrow 4.00$

Spreed

Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.00

STARTING FUEL DELIVERY

Rated speed rpm : 100

N11

Del. quantity

cm3/1000 strokes : 210.00

Tolerance

cm3/1000 strokes : +- 10.00

Check tolerance

cm3/1000s. : +- 14.00

LOW IDLE

Rated speed rpm : 300.0

Rack travel in mm : 5.70 Tolerance mm : + 0.30

Del. quantity

cm3/1000 strokes : 19.00

Tolerance

cm3/1000 strokes : +-3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16,02,90

Test oil

: ISO-4113

Combination No. : 0 402 648 803

Injection pump

Pump designation : PE8P12OA920/4LS7003

EP type number : 0 412 628 801

Governor

Governer design. : RQ750PA528

Governer no. : 0 421 801 126

Cust. part No. :

Customer-spec. information

Customer : SAAB-SCANIA

Motor

: s. Bemerkungen**

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance *C

: 40.0 : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter: 3.00

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : +- 0.05

Check

tolerance mm : $\leftarrow 0.10$

Rack travel in mm: 10.50

Tolerance mm : +1.50

Firing order : 1-2-7-3-4-5

: - 5- 8

Phasing

: 0-45-90-135-180-225

: -270-315 : +- 0.50

Tolerance

Check

tolerance *NW

: ← 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm

: 700

Rack travel in mm: 12.85

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 188.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

: +- 4.00

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 9.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 188.00

Tolerance

cm3/1000 strokes : \leftarrow 1.00

Check tolerance

cm3/1000s : $\leftarrow 4.00$

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 87.0 tolerance degree : +-4.0

RATED SPEED

rack travel mm : 11.80
Rated speed rpm : 752.5
Tolerance 1/min : + 2.5

rack travel mm : 4.00
Rated speed rpm : 790.5
Tolerance 1/min : +- 6.5

rack travel mm : 0.50
Tolerance mm : +- 0.50
Rated speed rpm : 850

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 12.85 Tolerance mm : + 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 265.00

Tolerance

cm3/1000 strokes : +- 25.00

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.04.90 : ISO-4113

Combination No. : 0 402 648 860

Injection pump

Pump designation : PE8P120A920/4LS7125

EP type number : 0 412 628 833

Governor

Governer design. : RQV200..1050PA736-6

Governer no. : 0 421 813 740

Cust. part No. :

Customer-spec. information

Customer : SCANIA

Motor

: DS14, DSC14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

: 40.0

Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.50

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

: 208.5

Tolerance bar $: \leftarrow 1.5$

Test lines : 1 680 750 015

Outside diameter : 6.00

x inside diameter: 3.00

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-2-7-3-4-5

: - 6- 8

Phasing

: 0-45-90-135-180-225

: -270-315 : +- 0.50

Tolerance

Check

tolerance *NW

: **←** 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.55

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 215.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s.

: +- 4.00

Spreed

Tolerance cm3/1000 strokes : 6.0 Check tolerance : 9.0 cm3/1000s.Rated speed rpm : 225.0 Rack travel in mm: 5.10 Tolerance mm : **←** 0.20 Del. quantity cm3/1000 strokes : 18.00 Tolerance cm3/1000 strokes : +2.00Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL

Rated speed rpm : 225

guide sleeve

travel min : 1.40 : +- 0.20 Tolerance mm

Rated speed rpm : 350

guide sleeve

travel mm : 2,60 Tolerance mm : + 0.30

Rated speed rpm : 650

guide sleeve

travel mm : 4.30 Tolerance mm : + 0.30

Rated speed rpm : 1095

guide sleeve

travel mm : 8.30 Tolerance mm : **←** 0.10

Rated speed rpm : 1215

guide sleeve

travel mm : 9.90 : + 0.20Tolerance mm

GUIDE SLEEVE POSITION

control lever

position degree : -1

Rated speed rpm : 1100

Rack travel in mm : 16.50 Tolerance mm : + 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700

Aneroid pressure

: 900

Del. quantity

cm3/1000 strokes : 215.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance

cm3/1000s. : +~ 4.00

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 116.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 16.5 Rated speed rpm : 1100

rack travel mm : 12.50 Rated speed rpm : 1095.0 Tolerance $1/\min$: + 5.0

rack travel mm : 4.00 Rated speed rpm : 1215.0 Tolerance 1/min : +- 15.0

: 0.50 rack travel mm Tolerance mm : +- 0.50 Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 65.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 225

rack travel mm : 5.0

Rated speed rpm : 100

CRT mm min. : 6.50

Testing:

Rated speed rpm : 225
rack travel mm : 5.10
Tolerance mm : + 0.20

rack travel mm : 2.00
Rated speed rpm : 410.0
Tolerance 1/min : +- 30.0

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 13.55 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 900
rack travel mm : 13.55
Tolerance mm : +- 0.05

MEASUREMENT

Rated speed rpm : 500

rack travel mm : 11.40 Tolerance mm : +- 0.26

Pressure hPa : 365
rack travel mm : 12.85
Tolerance mm : + 0.05

Pressure hPa : 215 rack travel mm : 12.00 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 1050

Del. quantity

cm3/1000 strokes : 209.00

Tolerance

cm3/1000 strokes : +- 4.00

Check tolerance

cm3/1000s. : $\leftarrow 6.00$

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 160.00

Tolerance

cm3/1000 strokes : + 2.00

Check tolerance

cm3/1000s. : + 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 265.00

Tolerance

cm3/1000 strokes : +- 25.00

LOW IDLE

Rated speed rpm : 225.0

Rack travel in mm : 5.10
Tolerance mm : +- 0.20

Del. quantity

cm3/1000 strokes : 18.00

Tolerance

cm3/1000 strokes : +- 2.00

Spreed Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.05.90 : ISO-4113

Combination No. : 0 402 746 810

Injection pump

Pump designation : PES6P120A720R87135

EP type number : 0 412 726 807

Governor

Governer design. : RQV325...900PA848K

Governer no. : 0 421 815 168

Cust. part No. : 313GC5173P10

Customer-spec. information

Customer : MACK TRUCKS

Motor : E6 350 4VH Power KW : 261.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : + 2.0

Overflow valve : 2 417 413 011

Inlet press. bar : 1.50

Overflow quantity

min. l/h : 165.0 Tolerance l/h : +- 5.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

N18

Outside diameter : 6.00

x inside diameter: 2.00

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 18.0

Tolerance bar : +1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

: - L.

Phasing : 0-60-120-180-240

: -300

Tolerance

: + 0.50

Check

tolerance *NW

: +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.95

Tolerance mm : $\leftarrow 0.05$

Del. quantity

cm3/1000 strokes : 237.00

Tolerance

cm3/1000 strokes : + 1.00

Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s.: 9.0 Rated speed rpm : 325.0 Rack travel in mm : 4.10 Tolerance mm : + 0.10Del. quantity cm3/1000 strokes : 35.00 Tolerance cm3/1000 strokes : + 3.00Check tolerance cm3/1000s. : +- 5.00 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rom : 325 guide sleeve : 1.30 travel mm Tolerance mm : + 0.10Rated speed rpm : 450 quide sleeve travel mm : 3.20 Tolerance mm : + 0.10Rated speed rpm : 850 guide Sleeve travel mm : 6.00 Tolerance mm : + - 0.10Rated speed rpm : 1000 guide sleeve travel mm : 7.60 Tolerance mm : + - 0.10

control lever position degree : -1 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 900 bel, quantity cm3/1000 strokes : 237.00 Tolerance cm3/1000 strokes : +- 1.00Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 57.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.90 Rated speed rpm : 955.0 Tolerance 1/min : +- 5.0 rack travel mm : 4.00 Rated speed rpm : 1090.0 Tolerance 1/min : + 15.0 rack travel mm : 0.50 Tolerance mm : ← 0.50 Rated speed rpm : 1250 LOW IDLE control lever position degree : 11.0

control lever
position degree : 11.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 4.1

Rated speed rpm : 275

GUIDE SLEEVE POSITION

CRT mm min. : 1.50

Testing:

Rated speed rpm : 325
rack travel mm : 4.10
Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 900 rack travel mm : 13.95 Tolerance mm : + 0.05

Rated speed rpm : 625 rack travel mm : 14.15 Tolerance mm : + 0.05

Rated speed rpm : 800 rack travel mm : 14 05 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 6.75 Tolerance mm : + 6.75

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 625
Pressure hPa : 900
rack travel mm : 14.15
Tolerance mm : + 0.05

MEASUREMENT

Rated speed rpm : 625

rack travel mm : 8.70
Tolerance mm : +- 0.20

Pressure hPa : 275
rack travel mm : 10.05
Tolerance mm : +- 0.05

Pressure hPa : 570
rack travel mm : 12.50
Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 625

Del. quantity

cm3/1000 strokes : 260.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed

Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.

Rated speed rpm : 400

Del. quantity

cm3/1000 strokes : 144.00

Tolerance

cm3/1000 strokes : - 2.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 8.70 Tolerance mm : +- 0.20

Del. quaritity

cm3/1000 strokes : 190.00

Tolerance

cm3/1000 strokes : +- 20.00

Check tolerance

cm3/1000s. +-30.00

LOW IDLE

Rated speed rpm : 325.0

Rack travel in mm : 4.10 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 35.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 5.00

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 02.05.90

Test oil

: ISO-4113

Combination No. : 0 402 746 814

Injection pump

Pump designation : PES6P120A720RS7135

EP type number : 0 412 726 807

Governor

Governer design. : RQV325...850PA848

: -1K

Governer no.

: 0 421 815 169

Cust. part No. : 313GC5173P6

Customer-spec. information

Customer : MACK TRUCKS

Motor

: E6 300 4VH

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 011

Inlet press. bar : 1.50

Overflow quantity

min. L/h : 165.0 Tolerance L/h : +- 5.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

har

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 008

N22

Outside diameter : 6.00

x inside diameter: 2.00

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 18.0

Tolerance bar : +- 1.0

Prestroke mm : 2.80 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing

: 0-60-120-180-240

: ~300 : +- 0.50

Tolerance Check

: +- 0.75

tolerance *NW

Start of delivery mark

Barrel no. : 1

EASIC SETTING

Rated speed rpm : 850

Rack travel in mm: 12.95

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 201.00

Tolerance

cm3/1000 strokes : +- 1.00

Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Sheck tolerance cm3/1000s. : 9.0 Rated speed rpm : 325.0 Rack travel in mm: 4.60 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 35.00 Tolerance cm3/1000 strokes : + 3.00Check tolerance cm3/1000s. : **←** 5.00 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL : 325 Rated speed rpm guide sleeve travel mm : 1.30 Tolerance mm : +- 0.10 Rated speed rpm : 450 guide sleeve : 2.95 travel mm : +- 0.15 Tolerance mm : 850 Rated speed rpm guide sleeve travel mm : 6.30 : + 0.10Tolerance mm : 1000 Rated speed rom guide sleeve : 7.80 travel mm : + 0.10Tolerance mm GUIDE SLEEVE POSITION

control lever position degree : -1 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure : 900 Del. quantity cm3/1000 strokes : 201.00 Tolerance cm3/1000 strokes : +-1.00Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 56.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 905.0 Tolerance 1/min : +- 5.0 rack travel mm : 4.00 Rated speed rpm : 1040.0 Tolerance 1/min : +- 15.0 rack travel mm : 0.50 : + - 0.50Tolerance mm Rated speed rpm : 1100

LOW IDLE

control lever

: 11.0 position degree tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325 rack travel mm : 4.6

Rated speed rpm : 275 CRT mm min. : 1.50

Testing:

Rated speed rpm : 325
rack travel mm : 4.60
Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 850
rack travel mm : 12.95
Tolerance mm : + 0.05

Rated speed rpm : 700 rack travel mm : 13.40 Tolerance mm : + 0.10

Rated speed rpm : 600 rack travel mm : 13.60 Tolerance mm : + 0.10

Rated speed rpm : 500 rack travel mm : 6.55 Tolerance mm : ← 6.55

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 900
rack travel mm : 13.60
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 600

rack travel mm : 10.10
Tolerance mm : + 0.20

Pressure hPa : 250
rack travel mm : 10.95
Tolerance mm : + 0.05

Pressure hPa : 475
rack travel mm : 12.80
Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 220.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Aneroid pressure

hPa : 900 Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 236.00

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.00

Aneroid pressure

hPa :)

Rated speed rpm : 400

Del. quantity

cm3/1000 strokes : 156.00

Tolerance

cm3/1000 strokes : +- 2.00

Check tolerance

cm3/1000s. : +- 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.10 Tolerance mm : + 0.20

Del. quantity

cm3/1000 strokes : 215.00

Tolerance

cm3/1000 strokes : +- 20.00

Check tolerance

cm3/1000s. : +- 30.00

LOW IDLE

Rated speed rpm : 325.0

Rack travel in mm : 4.60 Tolerance mm : +- 0.10

Del. quantity cm3/1000 strokes : 35.00

Tolerance

cm3/1000 strokes : +3.00

Check tolerance cm3/1000s. : **←** 5.00

Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0